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# GRAMMATOGRAPHY

A

MANUAL OF REFERENCE

TO THE

ALPHABETS OF ANCIENT AND MODERN  
LANGUAGES

133922

BASED ON THE GERMAN COMPILATION

OF

F. BALLHORN.

411  
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## P R E F A C E.

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THE GRAMMATOGRAPHY is offered to the Public as a compendious introduction to the reading of the most important ancient and modern languages. Simple in its design, it will be consulted with advantage by the Philological Student, the Amateur Linguist, the Bookseller, the Corrector of the Press, and the diligent Compositor.

Although substantially based on "Ballhorn's Alphabete," a German compilation, which, in the space of a few years, passed through nine editions, the present manual has in several articles been very considerably improved and enlarged. Of the new observations which have been inserted, some may prove useful even when this work shall be consulted by the side of the respective Grammars. With regard to the Asiatic Alphabets, it may be stated, that the continued efforts to obtain trustworthy specimens have, in some instances, led to highly satisfactory results. In preparing the type of the Chinese characters, the lateral "Tones" have been adjoined to the 214 symbols of pronunciation. These additions will enable the student, instructed by native teachers, to remember with greater facility the varying articulation of vowel-sounds.










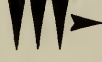


























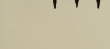
The publishers entertain the hope, that the present work, an humble attempt to assist in the furtherance of philological pursuits, will obtain the encouraging consideration of competent scholars, whose suggestions, available for future editions, are respectfully solicited.

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# PERSIAN CUNEIFORM CHARACTERS.































































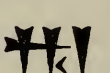

























There are two main families of Cuneiform Characters which, before the expedition of Alexander the Great, were in use nearly in all Asiatic Countries, subjected to the (Achaemenides) Persian Kings. One of these, the Arian arrow-headed, is here given, and is a pure alphabet of fixed characters, which was made use of by the old Persians, proper, and is now read with tolerable accuracy. The other, however, not yet deciphered with sufficient certainty, was employed, with some modifications, by at least five different nations, the Babylonians, the Assyrians, the Medo-Scythians (the second in the triglot inscriptions of Persepolis and Bisutun), the Susians and the Armenians. Almost in each of these five sorts of characters can be distinguished three styles, the Archaic, the Lapidary, and the Cursive.

Form	Value	Form	Value	Form	Value	Form	Value
	a		t		m before i		s (sh)
	i		t' before i		m' before u		z
	u		t' before u		n		z', g'
	k		th		y		h
	q		d		r		thr (tr)
	kh		dh		r'		rp, q
	g		p		f		d, h
	gh		f		v		b, u, m, i
	k'		b		ç (s)		point for separating words.
	g'		m				

# MEDIAN CUNEIFORM CHARACTERS

Form	Value	Form	Value	Form	Value	Form	Value
	a		t		phi		vo
	â		ta		y		s
	i		ti		yu		sa
	î		tu		yo		su
	u		th		r		s'
	û		thi		ra		s'a
	q		thu		ri		s'i
	qu		p		ru		z
	k		pa		ro		za
	ka		pi		lu		h
	ku		pe		fi		ha
	kh		pu		fe		n
	kha		ph		v		ni
	khu		pha		vu		m

# ASSYRIAN CUNEIFORM CHARACTERS

Form	Value	Form	Value	Form	Value	Form	Value
	a		ch		n		r
							
	a, ya		t		p		r
							
	b		t, s		ds, z, dsh or j		rsh
							
	g, kh		t, s		ds, z, dsh or j		s
							
	d		i		k		sh
							
	h		i, y		k		sh
							
	u		y		r		a, z
							
	o		kh		r		nue
							
	v, h, a, r		m, v		r		vush
							
	ch		n		r		vush
							
	ch		n		r		vush
							

# OLDEST CHARACTERS

Arrangement	Hieroglyphics	Hieratic	Demotic	Phœnician	Numidian	Early - Hebrew
א Alëph			...	𐤀 𐤁	...	א
ב Bëth				𐤂 𐤃	𐤄	ב ג
ג Gîmel		...	...	𐤄 𐤅	...	ג ד
ד Dāleth			...	𐤆 𐤇	𐤈	ד ה
ה Hë			𐤉	𐤈	𐤉	ה ו
ו Vāv			...	𐤊 𐤋	...	ו ז
ז Zăyîn			...	𐤌	...	...
—			...	...	...	...
—			𐤍	...	...	...
ח Chëth			...	𐤎 𐤏	𐤐	ח ט
ט Tëth		...	𐤑	𐤐	𐤑	...
י Yōdh			𐤒	𐤑 𐤒	...	י כ
כ Kăph			𐤓	𐤓 𐤔 𐤕	𐤖 𐤗	כ ל
ל Lāmëdh			𐤔	𐤕 𐤖 𐤗	𐤘	ל
מ Mēm			𐤕	𐤗 𐤘 𐤙	𐤚 𐤛	מ
נ Nūn			...	𐤚 𐤛	𐤜	נ
ס Sāmëk			𐤞	𐤛 𐤜	𐤝	...
ע Ayîn			𐤟	𐤜 𐤝	𐤞	ע פ
פ Pë		𐤠	𐤟	𐤞 𐤟	𐤠	פ
צ Tsādhë		...	...	𐤠 𐤡	...	צ
ק Q'ōph		𐤢	𐤡	𐤡 𐤢	𐤣	ק ר
ר Rësh		𐤣	𐤢	𐤣 𐤤	𐤥	ר ש
ש Shīm		𐤤	𐤣	𐤤 𐤥 𐤦	...	ש
ת Tāv		...	...	𐤦 𐤧	𐤨 𐤩	ת
ה		𐤨	𐤧	...	...	...

# OLDEST CHARACTERS

Aramaic	Estrangelo	Palmyrenian	Kufic	Old - Hellenic	Old - Italic	Etrurian
𐤀 𐤁	𐤀	𐤀 𐤁 𐤂	ا	Α	Α 𐌀 𐌁	Α Α
𐤂	𐤂	𐤂	ب	Β Β	Β Β	◊ ◊ } a
𐤃	𐤃	𐤃	𐤃	Γ Γ 𐀀	( 7 )	Α 𐌁 } a
𐤄	𐤄	𐤄	𐤄	Δ 𐀁 𐀂	Α 9 Δ	9 Α } a
𐤅	𐤅	𐤅	𐤅	Ε Ε	Ε 𐌂 Ε	Κ Κ 𐌃 } k, g
𐤆	𐤆	𐤆	𐤆	Ϝ ϝ	𐌄 𐌅 𐌆	𐌄 𐌅 𐌆 } t, d
𐤇	𐤇	𐤇	𐤇	Ζ	𐌇 𐌈	𐌇 𐌈 } t, d
...	...	...	𐤈	Η	𐌉	𐌉 𐌊 e
...	...	...	𐤉	Θ	...	8 f
𐤊	𐤊	𐤊	𐤊	Η Η	𐌋 𐌌	𐌋 𐌌 h
𐤋	𐤋	𐤋	𐤋	⊙	⊙ 𐌍	𐌍 i
𐤌	𐤌	𐤌	𐤌	𐀂 𐀃	𐌎 𐌏	𐌎 𐌏 } l
𐤍	𐤍	𐤍	𐤍	Κ Κ	Κ Κ	𐌐 𐌑 } l
𐤎	𐤎	𐤎	𐤎	Λ Λ	𐌒 𐌓	𐌒 𐌓 } m
𐤏	𐤏	𐤏	𐤏	Μ Μ	𐌔	𐌔 𐌕 } m
𐤐	𐤐	𐤐	𐤐	Ν	𐌖 𐌗	𐌖 𐌗 } n
𐤑	𐤑	𐤑	𐤑	𐀄 𐀅	𐌘	𐌘 𐌙 } n
𐤒	𐤒	𐤒	𐤒	Ο	𐌚 𐌛	Θ Θ } o
𐤓	𐤓	𐤓	𐤓	𐀆	𐌜 𐌝	⊙ ⊙ } o
𐤔	𐤔	𐤔	𐤔	Ζ	𐌞	⊙ ⊙ } o
𐤕	𐤕	𐤕	𐤕	Ϙ ϙ	9 0 Δ	𐌟 𐌠 } p, b
𐤖	𐤖	𐤖	𐤖	𐀇 𐀈	Α Ρ	Δ Δ } r
𐤗	𐤗	𐤗	𐤗	Μ Μ	𐌠	9 0 0 } r
𐤘	𐤘	𐤘	𐤘	𐀉 𐀊	𐌡 𐌢	2 3 4 s
𐤙	𐤙	𐤙	𐤙	𐀋 𐀌	𐌣 𐌤	𐌣 𐌤 } u
...	...	...	𐤚	𐀍 𐀎	𐌥	𐌥 } v, u

HEBREW

Form	Name	Pronun- ciation	Numer- value
א	Aleph	Spiritus lenis	1
ב	Beth	b bh	2
ג	Gimel	g gh	3
ד	Daleth	d dh	4
ה	He	h	5
ו	Vav	w	6
ז	Zayin	s soft	7
ח	Cheth	ch	8
ט	Teth	t	9
י	Yodh	j	10
כ, final י	Kaph	k kh	20
ל	Lamedh	l	30
מ, final ם	Mem	m	40
נ, final ן	Nun	n	50
ס	Samek	s	60
ע	Ayin	guttural	70
פ, final ף	Pe	p ph	80
צ, final ץ	Tsadhe	ss	90
ק	Q'oph	q	100
ר	Resh	r	200
ש	Sin	s	300
ת	Shin	sh	400
ת	Tav	t th	400

Final- Kaph  
with Shva ך with Q'amets ך  
with Daghes and Q'amets ך

LIGATURES.

י" or י" = ית  
ח' = חל, also instead of חל

NOTES.

The Hebrew Alphabet, like all Semitic alphabets, consists only of consonants, 22 in number, some of which, however, have also the force of vowels. Hebrew is read from right to left. Because at the end of the lines, words cannot be divided, the following dilatable characters (*dilatabiles*) were employed to help to justify, or fill up the lines; but now the practice is all but obsolete.

ם ת ל ה ה ז

CONSONANTS.

Notes on Pronunciation.

ס is the softest guttural, an emission of the breath scarcely to be heard, the Spiritus lenis of the Greeks, similar to η, but much softer.

ח before a vowel, is our aspirated h (the Spiritus asper of the Greeks); but after a vowel, at the end of a syllable, it is a guttural, and, at the end of words, it often supplies the place of a vowel.

ע 1) is a guttural g, accompanied by a grating or rattling sound; 2) a softer breathing like s. In reading and transcribing hebrew words, it is now usual to omit ע and s, e. g. אלי Eli.

פ is the harshest guttural, like the German ch as pronounced by the Swiss, or the Spanish x and j.

ק is pronounced in Hebrew more like a rattling guttural, than as a pure lingual, and partakes of both sounds.

ש and ש were originally but one and the same letter, as they still are when written without points; but as in some words this letter had a softer sound, similar to s, this two-fold pronunciation is distinguished by the grammarians by the diacritical point: ש (sh) and ש (s).

ז is the English z.

ט, ק and צ are strongly articulated sounds, produced by a compression of the lower organs of the mouth; the two first, therefore, differ essentially from ת and כ which are equivalent to our t and k, and are often aspirated.



*Daghesh forte*, doubling the consonants.

*Daghesh lene*, hardening the consonant; it stands only in the six *mutae*: כ פ ט ב ג ד in the above named cases; otherwise the point occurring in these consonants must be a *Daghesh forte*.

*Mappiq*, indicates that those consonants, which are also used as vowels, are then to be pronounced as consonants; in modern printing it is made use of only in the ם at the end of the words.

In opposition to the point hardening the consonant, a little stroke standing above the consonant indicates his softer sound. This stroke called

*Raphe* (ֿ) is now almost out of use, and is only employed in order to indicate expressly the absence of a *Daghesh* or *Mappiq*.

### ACCENTS.

The general design of the accents is to indicate the rhythmical members of the verses in the Old Testament. In doing this, they perform a twofold duty; for the accents mark at one and the same time partly the logical relation of each word to the whole sentence, and partly the accented syllable of each single word. In the first case the accents supply the punctuation, in the latter they are signs of tone. — As *signs of tone*, the different accents are equivalent, because there is in Hebrew only one kind of accentuation. In most words, the last syllable is accented, more rarely the last but one. — As *signs of punctuation*, their use is more complicated, because they not only separate words, like our points, commas and colons, but also join one to the other. Therefore they are divided in *Distinctivi* and *Conjunctivi*. In the following list they are arranged not according to their grammatical value, but according to their being placed below the consonants or *above* them, in order to give a more facile view of them.

#### ACCENTS PLACED UNDER CONSONANTS.

Silluq only at the end of the verse, therefore always joined with : Soph-pasuq, which stands between the single verses.

- ^ Athnach, mostly in the midst of a verse
- < Yethibh (always to the left of the vowel).
- ˘ Tebhir
- ˘ Tiphcha initiale
- ˘ Merkha
- ˘ Double-Merkha
- ˘ Munach
- < Mahpakh (to the right of the vowel)
- ˘ Darga
- ˘ Yärach
- ˘ Tiphcha finale.

#### ACCENTS PLACED ABOVE CONSONANTS.

- ˙ Segholta
- ˙ Zaqeph-qaton
- ˙ Zaqeph-gadhol
- ˙ Rebhia
- ˘ Zarqa
- ˙ Qadma
- ˙ Pashta
- ˙ Shalsholet
- ˙ Paser
- ˙ Qarne-phara
- ˙ Great-Telisha
- ˙ Little-Telisha
- ˙ Gäresh
- ˙ Double-Gäresh.

#### ACCENTS CONSISTING OF TWO PARTS BELONGING TOGETHER, THE ONE ABOVE, AND THE OTHER BELOW CONSONANTS.

- ˘˙ Merkha mahpakhatum
- ˘˙ Merkha sarqatum
- ˘˙ Mahpakh sarqatum.

- : Soph-pasuq, separating verses.
- ! Pesiq, between the words.
- Maqqeph, hyphen, aloft, between the words.
- ˙ Metheg, sign of tone (to the left of the vowel).

### NUMERALS.

There are no numerical ciphers in Hebrew; but consonants are used instead of them. The units are expressed by א—ו, the tens by י—צ, 100—400 by ק—ד. The numbers 500—900 sometimes are expressed by the five final letters

ך 500    ך 600    ך 700    ך 800    ך 900,

sometimes by ה=400 with addition of the other hundreds, e. g. חק=500. In compound numbers, the greater is placed first, e. g. יא 11, קכא 121. The number 15 is written with טו (9+6), instead of יה, because the name of God יהוה begins with these letters; and for the same reason, 16 is written טז instead of יז. The thousands are expressed by the units, superscribing two points, e. g. ס 1000.

### ABBREVIATIONS.

- ' A stroke aloft to the left of the consonant, e. g. 'א, denotes that this consonant serves as a numeral. By the side of the last consonant of a word, e. g. 'מס (= מסורה) it marks an abbreviation.
- " Two strokes above a word, e. g. "א, indicate that each of these letters stands for a separate word abbreviated.
- ° or \* in copies of the Hebrew Bible refer to the readings placed in the margin or at the foot of the page. The first is of Masoretic, and the other is of modern origin.

RABBINIC

Form	Name	Pronunciation
א	Aleph	Spiritus lenis
ב	Beth	bh b
ג	Gimel	gh g
ד	Daleth	dh d
ה	He	h
ו	Vav	w
ז	Zayin	s
ח	Cheth	ch guttural
ט	Teth	t
י	Yodh	y
כ, final ך	Kaph	ch k
ל	Lamedh	l
מ, final ם	Mem	m
נ, final ן	Nun	n
ס	Samek	s
ע	Ayin	guttural
פ, final ף	Pe	ph p
צ, final ץ	Tsadhe	z
ק	Q'oph	k
ר	Resh	r
ש	Shin Sin	sh s
ת	Tav	th t

GERMAN-RABBINIC

Form	Pronunciation
א	a
ב	b
בּ	v f
ג	g
ד	d
ה	h
ו	v u o
וװ	w
ז	s
ח	ech
ט	t
י	i j e short
כ, final ך	c
כּ	ch
ל	l
מ, final ם	m
נ, final ן	n
ס	s ss
ע	e long
פ, final ף	p
פּ	ph pf v
צ, final ץ	z tz
ק	k ck q
ר	r
ש	s sh
ת	t
תּ	tt

DIPHTHONGS.

אױ au, ײ ei, ײײ eu, ױ ö ü german.

HEBREW RUNNING-HAND

Form		Name	Pronun- ciation	Numerical value	Ligatures
Polish	German				
א	/k	Aleph	א a	1	
ב	ב	Beth	ב b	2	בּ = בע be
ג	ג	Gimel	ג g	3	גּ = בה bh
ד	ד	Daleth	ד d	4	
ה	ה	He	ה h	5	הּ = נג ng
ו	ו	Vav	ו w	6	וּ = נד nd
ז	ז	Zayin	ז s	7	זּ = נה nh
ח	ח	Cheth	ח ch	8	
ט	ט	Teth	ט t	9	טּ = נפ nf
י	י	Yodh	י y	10	יּ = ננ nn
כ	כ	Kaph	כ cch	20	
ל	ל or ל	Lamedh	ל l	30	לּ = נו nw
מ	מ	Mem	מ m	40	מּ = ני nj
נ	נ	Nun	נ n	50	נּ = נד zd
ס	ס	Samek	ס ss	60	
ע or ע	ע or ע	Ayin	ע e	70	עּ = צו zw
פ	פ	Pe	פ p	80	פּ = צי zi
ף	ף	Fe	ף f	90	
צ	צ	Tsadhe	צ c or z	100	צּ with mark of ab- breviation, in use at the end of certain words.
ק	ק	Q'oph	ק k	200	
ר	ר	Resh	ר r	300	
ש	ש	Shin	ש sh	400	
ת	ת	Tav	ת th	500	

FINAL LETTERS.

Polish.		German.	
כּ	= כ cch	כּ	= כ cch
מּ	= מ m	מּ	= מ m
נּ	= נ n	נּ	= נ n
פּ	= פ f	פּ & צ	= פ f
צּ	= צ c z	צּ צּ	= צ c z

SAMARITAN

Form	Name	Pronun- ciation	Numerical value
Ⲁ	Aleph	Spiritus lenis	1
ⲁ	Beth	b bh	2
Ⲃ	Gimel	g gh	3
ⲃ	Daleth	d dh	4
Ⲅ	He	h Spir. asper	5
ⲅ	Vav	w v	6
Ⲇ	Zayin	s ds	7
ⲇ	Cheth	ch hh	8
Ⲉ	Teth	t	9
ⲉ	Yodh	y	10
Ⲋ	Kaph	k ch	20
ⲋ	Lamedh	l	30
Ⲍ	Mem	m	40
ⲍ	Nun	n	50
Ⲏ	Samek	s	60
ⲏ	Ayin	ⲡ hebrew	70
Ⲑ	Pe	p ph	80
ⲑ	Tsadhe	ts	90
Ⲓ	Q'oph	k	100
ⲓ	Resh	r	200
Ⲕ	Shin	sh	300
ⲕ	Tav	t th	400

NOTES.

The Samaritan is a Semitic language. Therefore, the alphabet consists only of consonants (22 in number) and is read from right to left. As in this language words cannot be separated at the end of the lines, the two letters ending the last word are separated from the others and placed at the end of the line; but in printing this is generally avoided by diminishing or enlarging the spaces between the single words.

Save some points and scanty orthographical signs, there are in Samaritan no vowel-marks, accents or other diacritical signs as in Hebrew. Therefore we are somewhat in the dark about the pronunciation of the consonants and vowels and it can be acquired only by comparison with the Syriac and the Hebrew.

VOWELS.

There are no vowel-marks as in other Semitic languages. However, to supply this want and to indicate somewhat the pronunciation, some consonants are used as vowels, viz.:

ā Ⲁ, Ⲅ, ⲏ  
ê Ⲁ, ⲉ  
ī ⲉ  
o, oo ⲅ

Of two consonants beginning a word, the first is pronounced as if it were a slight and indistinct vowel, similar to the Hebrew Shwa.

DIACRITICAL SIGNS.

The only diacritical sign is a stroke over the consonant (e. g. Ⲁ̄) serving to distinguish two different words written in the same manner, or two different forms derived from one and the same root, or to indicate some letter added or omitted. When placed over ⲉ or ⲅ, the stroke indicates that these letters are real consonants, not representing vowels.

PUNCTUATION.

A point is put by the side of the final letter of a word. Besides this, the following signs have been introduced by the transcribers:

- ⋈ or ⋉ or ⋊ at the end of a sentence,
- ⋋ (also ⋌) at the end of part of a sentence, like our colon,
- =⋈ or —<⋈ more seldom —⋈ etc., or compound —<⋈ =⋈ etc. at the end of a longer sentence or section,
- <⋈==⋈> or similar signs, sometimes again and again repeated, between the end of one section, paragraph or chapter, and the beginning of the other.

The numbers are written as in Hebrew (see under).

SYRIAC

Name	Form				Pronun- ciation	Numer. value
	uncon- nected	connect- ed with a preced- ing letter	connect- ed with both	connect- ed with a follow- ing letter		
Olaph	ܐ	ܐ	...	...	Spiritus lenis	1
Beth	ܒ	ܒ	ܒ	ܒ	b or v	2
Gomal	ܓ	ܓ	ܓ	ܓ	g	3
Dolath	ܕ	ܕ	ܕ	ܕ	d	4
He	ܚ	ܚ	ܚ	ܚ	h	5
Vau	ܘ	ܘ	ܘ	ܘ	W or V	6
Zain	ܙ	ܙ	ܙ	ܙ	z	7
Cheth	ܚ	ܚ	ܚ	ܚ	ch	8
Teth	ܛ	ܛ	ܛ	ܛ	t	9
Yud	ܝ	ܝ	ܝ	ܝ	y	10
Koph	ܟ	ܟ	ܟ	ܟ	ch	20
Lomad	ܠ	ܠ	ܠ	ܠ	l	30
Mim	ܡ	ܡ	ܡ	ܡ	m	40
Nun	ܢ	ܢ	ܢ	ܢ	n	50
Semcath	ܣ	ܣ	ܣ	ܣ	s	60
Ee	ܐ	ܐ	ܐ	ܐ	as in hebrew	70
Pe	ܦ	ܦ	ܦ	ܦ	p or f	80
Tsodé	ܥ	ܥ	ܥ	ܥ	ts or z	90
Quph	ܩ	ܩ	ܩ	ܩ	q	100
Rish	ܪ	ܪ	ܪ	ܪ	r	200
Shin	ܫ	ܫ	ܫ	ܫ	sh	300
Tau	ܬ	ܬ	ܬ	ܬ	th or t	400

VOWELS.

The Syriac is written from right to left. — The vowels are expressed by diacritical signs or some marks in imitation of the greek; the latter of which are now mostly in use. In former times both kinds were employed promiscuously.

Figure		Name	Pronun- ciation.
Syriac.	Greek.		
ܐ	Ⲱ ⲱ	Pethocho	ā
ܐ or ܐ	Ⲱ ⲱ	Rebotzo	ē
ܐ	Ⲱ ⲱ	Chebotzo	ī
ܐ or ܐ	Ⲱ	Zekopho	o
ܐ ܐ ܐ	Ⲱ ⲱ	Etsotso	oo

- DIACRITICAL SIGNS.
- *Ruchoch*, a point below an aspirated letter to indicate that it is to be aspirated.
  - *Qushoi*, a little point over an aspirated letter to indicate that it is not to be aspirated.
  - *Ribui*, two points placed horizontally above the word to indicate the plural.
  - *Marhetono*, a line above a letter between two consonants to indicate the absence of a vowel. Besides, this line signifies 1) a number, 2) an abbreviation, 3) an exclamation.
  - *Mehagyono*, a line below a letter, to show that though without a vowel it is to be pronounced as if it had one.
  - *Linea occultans*, a line placed below a letter to denote that it is to be mute or omitted in pronunciation.

- PUNCTUATION.
- marks a single part of the premise of a sentence.
  - marks the end of a premise; or, it is sign of interrogation.
  - marks the single parts of the conclusion of a sentence; or, larger interrogations.
  - ❖ or :: at the end of a period.

NUMERICAL VALUE.

The consonants of the alphabet supply the numbers from 1 to 400; in compound numbers, the greater precedes. Within 500—900, the tens from 50—90 are denoted by a point standing aloft. The mark ܐ under a unit denotes the thousands, ܐ the ten-thousands, ܐ the product of the thousands multiplied by the ten-thousands. In writing fractions, the numerator is denoted by a little stroke going from left to right, placed above the denominator.

LIGATURES.

ܐ ܠ Olaph-Lomad. ܠ ܐ Lomad-Olaph. ܐ ܐ Double-Gomal. ܐ ܐ Double-Lomad.

## SYRIAC

Cut in the printing-office of B. G. TEUBNER in Leipzig conformably to original drawings by Professor TULLBERG of Upsala and Professor BERNSTEIN of Breslau.

Form	Pronun- ciation	Name	Form	Pronun- ciation	Name	Form	Pronun- ciation	Name
1	a or Spirit. lenis.	Olaph	29	gh	Gomal	57	z (gr. ζ)	Zain
2			30			58		
3			31	d and dh		59	kh	Cheth
4	b and bh		32			60		
5			33			61		
6			34			62		
7	b	Beth	35	d	Dolath	63	t	Teth
8			36			64		
9			37			65		
10			38			66		
11	bh		39	dh		67	i	Yud
12			40			68		
13			41			69		
14			42			70		
15	g and gh		43	h	He	71	c and ch	Koph
16			44			72		
17			45			73		
18			46			74		
19	gh	Gomal	47	w v u	Vau	75	c	
20			48			76		
21			49			77		
22			50			78		
23	g		51			79		
24			52			80		
25			53			81		
26			54			82		
27	gh		55			83		
28			56			84		

## SYRIAC

SYRIAC									
Form	Pronun- ciation	Name	Form	Pronun- ciation	Name	Form	Pronun- ciation	Name	
85	c	Koph	115	s	Semcath	145	sh	Shin	
86			116			146			
87			117			147			
88			118	Ee	148	t and th	Tau		
89			119		149				
90	120		150						
91	121		151						
92	ch		122	p and ph(f)	Phe	152		t	
93			123			153			
94			124			154			
95		125	155						
96		126	156						
97	l	127	p		157	th			
98		128			158				
99		129			159				
100		130			160				
101		131			LIGATURES.				
102	m	132	Sharp s or ss	Tsodé	161	al	Olaph- Lomad		
103		133			162				
104		134			163				
105		135			164	gg	Double- Gomal		
106		136			165				
107		137			166				
108	n	138	k	Quph	167	gv	Gomal- Vau		
109		139			168				
110		140			169				
111		141			170			vn	Vau- Nun
112		142			171				
113		143			172				
114	s	Semcath	144	sh	Shin	173			

## SYRIAC

Form	Pronun- ciation	Name	Vowels, Accents and Orthographi- cal Signs	Points and Numbers
174	in	Yud-Nun	VOWELS AND ACCENTS.	POINTS.
175				
176				
177	la	Lomad- Olaph	203	224 .
178				
179				
180	lt	Lomad- Teth	204	225 _:
181				
182				
183	ll	Double Lomad	205	226 -:
184				
185				
186	lee	Lomad- Ee	206	227 _:
187				
188				
189	lt	Lomad- Tau	207	228 -:
190				
191				
192	mn	Mim- Nun	208	233 < Mark of marginal notes
193				
194				
195	na	Nun- Olaph	209	234 \ Number-Mark
196				
197				
200	ssn	Tsodé- Nun	210	NUMBERS.
201				
202				
203	ssg	Tsodé- Gomal	211	Form
204				
205				
206	mn	Mim- Nun	212	Value
207				
208				
209	na	Nun- Olaph	213	1
210				
211				
212	ssn	Tsodé- Nun	214	2
213				
214				
215	ssg	Tsodé- Gomal	215	3
216				
217				
218	mn	Mim- Nun	216	4
219				
220				
221	na	Nun- Olaph	217	5
222				
223				
224	ssn	Tsodé- Nun	218	6
225				
226				
227	ssg	Tsodé- Gomal	219	7
228				
229				
230	mn	Mim- Nun	220	8
231				
232				
233	na	Nun- Olaph	221	9
234				
235				
236	ssn	Tsodé- Nun	222	10
237				
238				
239	ssg	Tsodé- Gomal	223	20
240				
241				
242	mn	Mim- Nun	224	30
243				
244				
245	na	Nun- Olaph	225	40
246				
247				
248	ssn	Tsodé- Nun	226	50
249				
250				
251	ssg	Tsodé- Gomal	227	60
252				
253				
254	mn	Mim- Nun	228	70
255				
256				
257	na	Nun- Olaph	229	80
258				
259				
260	ssn	Tsodé- Nun	230	90
261				
262				
263	ssg	Tsodé- Gomal	231	100
264				
265				
266	mn	Mim- Nun	232	200
267				
268				
269	na	Nun- Olaph	233	300
270				
271				
272	ssn	Tsodé- Nun	234	400
273				
274				
275	ssg	Tsodé- Gomal	235	1000
276				
277				

ARABIC

A  
B  
  
J  
E  
A  
Z  
Z  
P  
E  
O  
  
P  
K  
A  
M  
N  
  
F  
I

Name	Form				Pronunciation	Numerical value
	Unconnected	Connected with a preceding letter	Connected with both	Connected with a following letter		
Elif	ا	ا	. . .	. . .	ن Spir. lenis	1
Ba	ب	ب	ب	ب	b	2
Ta	ت	ت	ت	ت	t	400
Tha	ث	ث	ث	ث	th	500
Jim	ج	ج	ج	ج	j	3
Hha	ح	ح	ح	ح	hh	8
Cha	خ	خ	خ	خ	ch	600
Dal	د	د	. . .	. . .	d	4
Dhal	ذ	ذ	. . .	. . .	dh or ds	700
Ra	ر	ر	. . .	. . .	r	200
Zay	ز	ز	. . .	. . .	z	7
Sin	س	س	س	س	s	60
Shin	ش	ش	ش	ش	sh	300
Ssad	ص	ص	ص	ص	ss or ç	90
Ddad	ض	ض	ض	ض	d or dd	800
Tta	ط	ط	ط	ط	tt or th	9
Zza	ظ	ظ	ظ	ظ	zz	900
Ain	ع	ع	ع	ع	و Spir. gutt.	70
Ghain	غ	غ	غ	غ	gh	1000
Fa	ف	ف	ف	ف	f	80
Qaf	ق	ق	ق	ق	k	100
Kaf	ك	ك	ك	ك	k soft	20
Lam	ل	ل	ل	ل	l	30
Mim	م	م	م	م	m	40
Nun	ن	ن	ن	ن	n	50
Ha	ه Final ه	ه Final ه	ه	ه	h	5
Waw	و	و	. . .	. . .	w	6
Ya	ي	ي	ي	ي	y, i	10

ORTHOGRAPHICAL SIGNS

ا ب ج د ه و ز ح ط ظ ع ف ق ك ل م ن ه و ي

VOWELS.

— Fatha, ä ä ë    — Kesre, ĩ ě    — Damma, oo o

At the end of the substantives the vowels are doubled to indicate the case, viz.:

— on    — in    — an

This is called *Nunation*, because, in pronouncing, Nun is added to the vowel.

DIPHTHONGS:    — ai    — au as in german.

ORTHOGRAPHICAL SIGNS.

- ° Jezma, separating syllables, is written over the final consonant of all shut syllable and indicates, that the syllable is finished and the consonant to be pronounced with the preceding vowel; it corresponds to the *Shwa quiescens* of the Hebrew.
- ~ Teshdid, mark of doubling. The final consonant of a syllable being the same as that beginning the following one, this consonant is written only once, but marked with the sign ~, which corresponds to the Hebrew *Daghesh forte*. In African manuscripts it is written v or λ.
- ⲁ Hamza is placed generally above the Elif, when this is used as a consonant and furnished with a vowel; when this vowel is a Kesre, the Hamza is placed beneath; sometimes also it stands above the Y. In Kufic Korans it is supplied by a little green stroke, in Moorish or African manuscripts by a thick green or yellow dot.
- ∞ Wesla, joining-mark. The Elif, at the commencement of a word, is sometimes in pronunciation absorbed by the final vowel of the preceding word. In this case, the vowel of the Elif is elided and marked by the Wesla.
- ~ Medda stands above an Elif pronounced by Fatha and followed by a Hamza; it indicates the prolongation of the a. It is placed, also, above an Elif at the commencement of a word, or instead of an omitted Elif. Besides, this sign is a mark of abbreviation.

PUNCTUATION.

There are no signs of punctuation in Arabic, only in the Koran the verses are separated by ✽. This sign, however, or ‘ or ‘ or a red dot, is employed also in other books at the end of a section. In manuscripts, sometimes, a new section begins with a word written in red colour; in manuscript dictionaries a red line is placed above each catch-word.

CIPHERS.

Formerly, the Arabs, like other oriental nations, used the letters of the alphabet to express numbers; at a later period, however, they adopted the following 10 special figures, called by us Europeans the Arabian ciphers, by the Arabs themselves the Indian ones.

١	٢	٣	٤	٥	٦	٧	٨	٩	٠
1	2	3	4	5	6	7	8	9	0

Regarding their composition and value they accord with our numerals, which are taken from them, whereas the consonants expressing ciphers are written from right to left, viz. ١٨٩١ (1861).

ARABIC LIGATURES

ب ج	Ba - Jim	ث چ	Tha - Cha
ب ح	Ba - Hha	ج ج	Jim - Jim
ب ح ج	Ba - Hha - Jim	ج ح	Jim - Hha
ب چ	Ba - Cha	ح ج	Hha - Jim
ت ج	Ta - Jim	ح ج ج	Hha - Jim - Jim
ت ح	Ta - Hha	ح ج ح	Hha - Jim - Hha
ت چ	Ta - Cha	ح ح	Hha - Hha
ث ح	Tha - Hha	ح ح ج	Hha - Hha - Jim

## ARABIC LIGATURES

	Hha - Cha		Kaf - Cha
	Cha - Jim		Lam - Elif
	Cha - Hha		Lam - Jim
	Sin - Jim		Lam - Jim - Hha
	Sin - Hha		Lam - Hha
	Sin - Cha		Lam - Hha - Jim
	Shin - Jim		Lam - Hha - Hha
	Shin - Hha		Lam - Cha
	Shin - Cha		Lam - Cha - Jim
	Ssad - Jim		Lam - Mim - Hha - Jim
	Ssad - Hha		Lam - Mim - Hha - Hha
	Ssad - Cha		Lam - Ya
	Ddad - Jim		Mim - Jim
	Ddad - Hha		Mim - Hha
	Tta - Hha		Mim - Hha - Jim
	Ain - Jim		Mim - Hha - Hha
	Ain - Hha		Mim - Cha
	Ghain - Jim		Nun - Jim
	Ghain - Hha		Nun - Hha
	Fa - Jim		Nun - Cha
	Fa - Hha		Ha - Jim
	Fa - Cha		Ha - Hha
	Fa - Ya		Ha - Cha
	Qaf - Jim		Ha - Mim
	Qaf - Hha		Ya - Jim
	Qaf - Cha		Ya - Jim - Hha
	Kaf - Elif		Ya - Hha
	Kaf - Jim		Ya - Hha - Hha
	Kaf - Hha		Ya - Cha

## AETHIOPIAN AND AMHARIC

Name	Form								Pronun- ciation
	with ä	with û	with î	with â	with ê	with ĕ	with ô		
Hoi	ሀ ha	ሁ hu	ሂ hi	ሃ ha	ሄ he	ህ he	ሆ ho	h	
Lawi	ለ la	ሉ lu	ሊ li	ላ la	ሌ le	ል le	ሎ lo	l	
Haut	ሐ ha	ሑ hu	ሒ hi	ሓ ha	ሔ he	ሐ he	ሐ ho	h	
Mai	መ ma	ሙ mu	ሚ mi	ማ ma	ሜ me	ማ me	ሞ mo	m	
Saut	ሠ sa	ሡ su	ሢ si	ሣ sa	ሤ se	ሠ se	ሠ so	s	
Rees	ረ ra	ሩ ru	ሪ ri	ራ ra	ራ re	ረ re	ረ ro	r	
Sat	ሰ sa	ሱ su	ሲ si	ሳ sa	ሴ se	ሰ se	ሰ so	s	
*Shat	ሸ sha	ሹ shu	ሺ shi	ሻ sha	ሼ she	ሸ she	ሸ sho	sh	
Kaf	ቀ ka	ቁ ku	ቂ ki	ቃ ka	ቄ ke	ቀ ke	ቀ ko	k	
Bet	በ ba	ቡ bu	ቢ bi	ባ ba	ቤ be	በ be	በ bo	b	
Tawi	ተ ta	ቱ tu	ቲ ti	ታ ta	ቤ te	ተ te	ተ to	t	
*Tshawi	ቸ tsha	ቹ tshu	ቺ tshi	ቻ tsha	ቼ tshe	ቸ tshe	ቸ tsho	tsh	
Harm	ረ ha	ሩ hu	ሪ hi	ራ ha	ራ he	ረ he	ረ ho	h	
Nahas	ረ na	ሩ nu	ሪ ni	ራ na	ራ ne	ረ ne	ረ no	n	
*Gnahas	ገ gna	ጉ gnu	ጊ gni	ገ gna	ገ gne	ገ gne	ገ gno	gn	
Alf	አ a	ኡ u	ኢ i	አ a	ኡ e	አ e	አ o	a	
Kaf	ኣ ka	ኣ ku	ኣ ki	ኣ ka	ኣ ke	ኣ ke	ኣ ko	k	
*Chaf	ከ cha	ከ chu	ከ chi	ከ cha	ከ che	ከ che	ከ cho	ch	
Wawi	ዐ wa	ዐ wu	ዐ wi	ዐ wa	ዐ we	ዐ we	ዐ wo	w	
Ain	ዐ a	ዐ u	ዐ i	ዐ a	ዐ e	ዐ e	ዐ o	y	
Zai	ዘ za	ዘ zu	ዘ zi	ዘ za	ዘ ze	ዘ ze	ዘ zo	z	
*Zshai	ዘ ja	ዘ ju	ዘ ji	ዘ ja	ዘ je	ዘ je	ዘ jo	j fr	
Yaman	የ ya	የ yu	የ yi	የ ya	የ ye	የ ye	የ yo	y	
Dent	ደ da	ደ du	ደ di	ደ da	ደ de	ደ de	ደ do	d	
*Jent	ደ ja	ደ ju	ደ ji	ደ ja	ደ je	ደ je	ደ jo	j	
Geml	ጊ ga	ጊ gu	ጊ gi	ጊ ga	ጊ ge	ጊ ge	ጊ go	g	
Tait	ጠ ta	ጠ tu	ጠ ti	ጠ ta	ጠ te	ጠ te	ጠ to	t	
*Tshait	ጠ tsha	ጠ tshu	ጠ tshi	ጠ tsha	ጠ tshe	ጠ tshe	ጠ tsho	tsh	
Pait	ጸ pa	ጸ pu	ጸ pi	ጸ pa	ጸ pe	ጸ pe	ጸ po	p	
Tzadai	ጸ tsa	ጸ tsu	ጸ tsi	ጸ tsa	ጸ tse	ጸ tse	ጸ tso	ts	
Tsappa	ፀ tsa	ፀ tsu	ፀ tsi	ፀ tsa	ፀ tse	ፀ tse	ፀ tso	ts	
Aff	ፈ fa	ፈ fu	ፈ fi	ፈ fa	ፈ fe	ፈ fe	ፈ fo	f	
Pa	ፐ pa	ፐ pu	ፐ pi	ፐ pa	ፐ pe	ፐ pe	ፐ po	p	

## DIPHTHONGS.

ቁ kua	ቁ kui	ቁ kua	ቁ kue	ቁ kue
ከከ hua	ከከ hui	ከከ hua	ከከ hue	ከከ hue
ከከ kua	ከከ kui	ከከ kua	ከከ kue	ከከ kue
ጊ gua	ጊ gui	ጊ gua	ጊ gue	ጊ gue

## NOTE.

The Aethiopian and the Amharic are read from left to right. The words are separated by: — The alphabet of both languages is syllabic; the Amharic, however, has seven orders of letters (each order consisting of 7 forms or characters), wanting in Aethiopian, which, in the above table, are marked by \*.

## AETHIOPIAN

Cut in the printing-office of F. A. BROCKHAUS in Leipzig under the direction of the German Oriental Society.

With ä	With û	With î	With â	With ê	With ë	With ô
ሀ ha	ሁ hû	ሂ hî	ሃ hâ	ሄ hê	ህ he	ሆ hô
ለ la	ሉ lû	ሊ lî	ላ lâ	ሌ lê	ል le	ሎ lô
ሐ ḥa	ሑ ḥû	ሒ ḥî	ሓ ḥâ	ሔ ḥê	ሐ ḥe	ሐ ḥô
መ ma	ሙ mù	ሚ mî	ማ mā	ሜ mè	ሞ me	ሞ mô
ሠ ṣa	ሡ ṣû	ሢ ṣî	ሣ ṣâ	ሤ ṣê	ሥ ṣe	ሦ ṣô
ረ ra	ሩ rû	ሪ rî	ራ rà	ራ rê	ሮ re	ሮ rô
ሰ sa	ሱ sù	ሲ sî	ሳ sâ	ሴ sê	ሰ se	ሰ sô
ቀ qa	ቁ qû	ቂ qî	ቃ qâ	ቄ qê	ቀ qe	ቀ qô
በ ba	ቡ bù	ቢ bì	ባ bá	ቤ bê	ብ be	ቦ bò
ተ ta	ቱ tù	ቲ tî	ታ tâ	ቲ tê	ት te	ቶ tô
ኀ ḥa	ኁ ḥû	ኂ ḥî	ኃ ḥâ	ኄ ḥê	ኀ ḥe	ኀ ḥô
ነ na	ኑ nû	ኒ nî	ና nâ	ኔ nê	ነ ne	ኖ nô
አ -a	ሁ -û	ሂ -î	ሃ -â	ሄ -ê	ህ -e	ሆ -ô
ከ ka	ከ kû	ከ kî	ከ kâ	ከ kê	ከ ke	ከ kô
ወ wa	ወ wû	ወ wî	ወ wâ	ወ wê	ወ we	ወ wô
ዐ a	ዐ 'û	ዐ 'î	ዐ 'â	ዐ 'ê	ዐ 'e	ዐ 'ô
ዘ za	ዘ zû	ዘ zî	ዘ zâ	ዘ zê	ዘ ze	ዘ zô
የ ya	የ yû	የ yî	የ yâ	የ yê	የ ye	የ yô
ደ da	ደ dû	ደ dî	ደ dâ	ደ dê	ደ de	ደ dô
ገ ga	ገ gû	ገ gî	ገ gâ	ገ gê	ገ ge	ገ gô
ጠ ṭa	ጠ ṭû	ጠ ṭî	ጠ ṭâ	ጠ ṭê	ጠ ṭe	ጠ ṭô
ጸ pa	ጸ pû	ጸ pî	ጸ pâ	ጸ pê	ጸ pe	ጸ pô
ጸ za	ጸ zû	ጸ zî	ጸ zâ	ጸ zê	ጸ ze	ጸ zô
ፀ ṣa	ፀ ṣû	ፀ ṣî	ፀ ṣâ	ፀ ṣê	ፀ ṣe	ፀ ṣô
ፈ fa	ፈ fû	ፈ fî	ፈ fâ	ፈ fê	ፈ fe	ፈ fô
ፒ pa	ፒ pû	ፒ pî	ፒ pâ	ፒ pê	ፒ pe	ፒ pô



# TURKISH.

The Turkish language is a compound of words taken from the Tatar, Persian and Arabic languages. The high dialect, only spoken at Constantinople by people of quality, and serving as the written language, is a compound of Persian and Arabic words. Like most oriental languages, Turkish is written and read from right to left.

ا	<i>Elif</i> supplies the german vowels <i>a, y, o, u</i> , the consonants of the word being hard; but the german <i>e, i, ö, ü</i> , the consonants being soft. When <i>Alif</i> is followed by a hard consonant, the $\text{—}$ ( <i>Ustun</i> ) is pronounced like <i>a</i> , the $\text{—}$ ( <i>Esre</i> ) like <i>y</i> , and the $\text{—}$ ( <i>Utru</i> ) like <i>o</i> or <i>u</i> . Following, however, a soft consonant, the $\text{—}$ ( <i>Ustun</i> ) is to be read as <i>e</i> , the $\text{—}$ ( <i>Esre</i> ) as <i>i</i> , and the $\text{—}$ ( <i>Utru</i> ) as <i>o</i> or <i>u</i> . In the middle and at the end of words, without <i>Hamzalif</i> , the <i>Alif</i> is always pronounced like <i>a</i> , but with <i>Hamzalif</i> , like <i>ê</i> .	ص	<i>Ssad</i> like sharp <i>ss</i> .
ب	<i>Ba</i> is our <i>b</i> . After <i>Ta, Tha, Jim, Cha, Sin, Shin, Ssad, Tta', Qaf, Gef</i> it is often read like <i>p</i> .	ض	<i>Ddad</i> , like our <i>z</i> ; the Arabs pronounce it like <i>d</i> .
پ	<i>Pa</i> is our <i>p</i> .	ط	<i>Tta</i> like <i>t</i> or <i>th</i> ; it is often confounded with <i>Ta</i> and <i>Dal</i> .
ت	<i>Ta</i> is our <i>t</i> . In the conjugation of some verbs it is changed into <i>Dal</i> .	ظ	<i>Zza</i> like our <i>z</i> .
ث	<i>Tha</i> is our <i>s</i> or <i>ss</i> , except the word <i>ثلث tult</i> . The Arabs pronounce it like <i>th</i> .	ع	<i>Ain</i> like a strong guttural and nasal <i>a, y, u</i> .
ج	<i>Jim</i> , the italian <i>g</i> before <i>e</i> or <i>i</i> . When meeting the consonants named above in connection with the letter <i>ب</i> , it is pronounced like <i>Tchim</i> .	غ	<i>Ghain</i> like <i>g</i> guttural.
چ	<i>Tchin</i> like our <i>ch</i> in chess.	ف	<i>Fa</i> like our <i>f</i> .
ح	<i>Hha</i> like <i>h</i> in have.	ق	<i>Qaf</i> like <i>k, kh</i> or <i>ck</i> .
خ	<i>Cha</i> , the german <i>ch</i> in brauchen.	ك	<i>Kaf</i> , like <i>q</i> or <i>k</i> , as in the french words <i>qui, quel</i> .
د	<i>Dal</i> like <i>d</i> . It is pronounced like <i>t</i> when meeting the consonants named above in connection with the letter <i>ب</i> .	ن	<i>Gef</i> , accords with our <i>g</i> in give; in some cases it is pronounced like <i>gi</i> very soft; in the middle of words and in some terminations like <i>y</i> .
ذ	<i>Dhal</i> like <i>z</i> .	ڭ	<i>Saghur Nun</i> , i. e. mute <i>Nun</i> , like the french nasal- <i>n</i> in <i>mon, son</i> .
ر	<i>Ra</i> like <i>r</i> .	ل	<i>Lam</i> our <i>l</i> ; in some cases it is soft like <i>l</i> in limb, in some hard like <i>l</i> in all.
ز	<i>Za</i> like our <i>z</i> .	م	<i>Mim</i> , like <i>m</i> .
س	<i>Sin</i> like <i>s, ss</i> .	ن	<i>Nun</i> our <i>n</i> ; but when followed by a <i>Ba</i> , it is pronounced like <i>m</i> .
ش	<i>Shin</i> like <i>sh</i> .	و	<i>Waw</i> our <i>w</i> or <i>v</i> ; furnished with <i>Utru</i> , it is pronounced like <i>u</i> in conjunction with hard consonants; like german <i>ü</i> or <i>ö</i> , however, in conjunction with soft ones.
		ه	<i>Ha</i> like our <i>h</i> ; at the end of words it is mostly pronounced like <i>a</i> or <i>e</i> .
		ي	<i>Lamelif, la</i> or <i>lia</i> (Ligature).
		ي	<i>Ya</i> , when a consonant like our <i>y</i> , when a vowel like <i>i</i> ; it represents a vowel only in the middle or at the end of words.

## ORTHOGRAPHICAL SIGNS.

- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>- <i>Ustun</i> is placed over the consonants and pronounced like <i>a</i> with a hard consonant, like <i>e</i> with a soft one.</li> <li>- <i>Esre</i> below the consonants, is pronounced like vowel <i>y</i> with a hard consonant, but like <i>i</i> with a soft one.</li> <li>• <i>Utru</i> is pronounced like <i>o</i> or <i>u</i> with a hard consonant, but like <i>o</i> or <i>u</i> with a soft one.</li> <li>= <i>Iki ustun</i> (double <i>Ustun</i>) like <i>en</i>.</li> <li>= <i>Iki esre</i> (double <i>Esre</i>) like <i>in</i>.</li> <li>• <i>Iki utru</i> (double <i>Utru</i>) like <i>on</i> or <i>un</i>.</li> </ul> <p style="text-align: center;">The three last marks are only employed in Arabic words.</p> | <ul style="list-style-type: none"> <li>° <i>Jesm</i> (sign of pause) is placed over a consonant wanting a vowel, followed by an other consonant.</li> <li>ˆ <i>Teshdid</i> or <i>Shedde</i> when placed over a consonant doubles it.</li> <li>˜ <i>Meddelif</i> or <i>Medda</i>, is only placed over the <i>Alif</i>, which, then, is always pronounced like <i>a</i>.</li> <li>ء <i>Hamzelif</i> or <i>Hamza</i>; placed over <i>Elif</i>, is pronounced like <i>ê</i>; over <i>Waw</i>, like <i>u</i>, over <i>Ya</i>, like <i>i</i>; at the end of words, ending with a vowel, like <i>i</i>.</li> </ul> |
|---|---|

# PERSIAN

Name	Form				Pronun- ciation	Numer: value	Notes
	uncon- nected	connected with a preceding letter	connected with both	connected with a following letter			
Elif	ا	آ	..	..	Spiritus lenis	1	<p>Many Arabic words having been introduced into the Persian language, the Persian alphabet consists of 32 consonants, which are written and read from right to left; of these consonants, 28 are common to both languages; only the following four are purely Persian:</p> <p>گ ژ چ پ</p>
Ba	ب	ب	ب	ب	b	2	
Pa	پ	پ	پ	پ	p	...	
Ta	ت	ت	ت	ت	t soft	400	
Tha	ث	ث	ث	ث	S sharp	500	
Jim	ج	ج	ج	ج	j	3	
Tchim	چ	چ	چ	چ	tch	...	
Hha	ح	ح	ح	ح	hh sharp	8	
Cha	خ	خ	خ	خ	kh <sup>1</sup> guttur.	600	
Dal	د	د	..	..	d	4	
Dhal	ذ	ذ	..	..	Z soft	700	<p>All Persian letters are consonants, except Elif, Waw and Ya, which also supply long vowels (the Waw, sometimes, represents a short vowel):</p> <p>ا a    و w    ی y</p> <p>The short vowels are written thus:</p> <p>ـ Zabar, a    ـ Zir, e    ـ Pish, u</p>
Ra	ر	ر	..	..	r	200	
Za	ز	ز	..	..	Z soft	7	
Zha	ژ	ژ	..	..	zh or j <sup>french</sup>	...	
Sin	س	س	س	س	S sharp	60	
Shin	ش	ش	ش	ش	sh	300	
Ssad	ص	ص	ص	ص	S sharp	90	
Ddad	ض	ض	ض	ض	Z hard	800	
Tta	ط	ط	ط	ط	t	9	
Zza	ظ	ظ	ظ	ظ	Z hard	900	
Ain	ع	ع	ع	ع	Spiritus lenis	70	<p>ORTHOGRAPHICAL SIGNS.</p> <p>ء Hamza, at the end of a word, sometimes supplies the Elif; it is also placed above an Elif in the middle of a word, when the Elif represents a consonant.</p> <p>و Teshdid, doubles the letter over which it is placed.</p> <p>~ Medda. Instead of an Elif written twice, a Medda is placed over it. It is properly a second Elif, but written lengthwise; sometimes it has a vertical form.</p> <p>و Jezma, over a consonant by which a syllable ends. It is also placed over Waw or Ya, when they form a diphthong with a preceding.</p>
Ghain	غ	غ	غ	غ	gh guttur.	1000	
Fa	ف	ف	ف	ف	f	80	
Qaf	ق	ق	ق	ق	k guttur.	100	
Kaf	ك	ك	ك	ك	k	20	
Gaf	گ	گ	گ	گ	g palatal	...	
Lam	ل	ل	ل	ل	l	30	
Mim	م	م	م	م	m	40	
Nun	ن	ن	ن	ن	n	50	
Waw	و	و	..	..	w	6	
Ha	ه	ه	ه	ه	h	5	<p>LIGATURE.</p> <p>آ Lam-Elif, la.</p>
Ya	ی	ی	ی	ی	y and i	10	

# AFGHAN OR PUSHTOO

Figure			Pronun- ciation	Figure			Pronun- ciation
unconnected	in the midst	at the com- mencement		unconnected	in the midst	at the com- mencement	
ا	ا ل	ا	a, á, i, u	ش	ش	ش	sh
ب	ب	ب	b	نب	نب	نب	khín
پ	پ	پ	p	ص	ص	ص	ss
ت	ت	ت	t	ض	ض	ض	dz
ټ	ټ	ټ	tt	ط	ط	ط	t
ث	ث	ث	t's	ظ	ظ	ظ	z
ش	ش	ش	t's	ع	ع	ع	æ, â
ج	ج	ج	j	غ	غ	غ	gh
چ	چ	چ	ch	ف	ف	ف	f
ح	ح	ح	h	ق	ق	ق	k, q
خ	خ	خ	kh	ک	ک	ک	k
د	د	د	d	گ	گ	گ	g
ډ	ډ	ډ	dd	ل	ل	ل	l
ذ	ذ	ذ	z	م	م	م	m
ر	ر	ر	r	ن	ن	ن	n
ړ	ړ	ړ	rr	ڼ	ڼ	ڼ	rrn
ز	ز	ز	z	و	و	و	w ú o
څ	څ	څ	dz	ه	ه	ه	h
ژ	ژ	ژ	jz	ء	ء	ء	a
س	س	س	s	ي	ي	ي	y, e, í, ai

## NOTES.

Before the introduction of arabic words, the original Pushtoo alphabet consisted only of 29 different sounds; at present, the Afghans make use also of the 28 arabic letters, and of these four letters used in Persian: **پ** and **څ**, from which results an alphabet of 40 different characters which are all consonants.

The Pushtoo vowels are the same as the Arabic and Persian:

— *Zabar* or *Fatha* a, — *Zer* or *Kasrah* e, — *Pesh* or *Zammah* u.

They are placed either above or under the consonant beginning a syllable, as: **ب** *ba*, **ب** *bi*, **ب** *bu*. *Zabar* followed by — is read as the

diphthong *au*; followed by **ي**, as the diphthong *ai*.

— or — *Jesm* or *Jesmah* indicates that the consonant has no vowel and the syllable is finished.

— *Meddah* or *Medd*, an other form of *Elif*, is sign of producing a syllable.

— *Teshdid* indicates that a consonant is to be pronounced double.

— *Weslu*, joining-mark.

— *Hamzah* supplies the place of *Elif*.





— — *Tanwin* is the arabic Nuration at the end of the words, pronounced by adding a *n* to the vowels: *an*, *in*, *yn*.

COPTIC

Figure	Name	Pronunciation	Notes
Α α	Alpha	ă	<p>The Coptic language is divided into two dialects: the upper-egyptian or thebaic or sahidic, and the lower-egyptian or memphitic or coptic par excellence, to which may be added a third. the bashmuric dialect. The letters Α — Ω in the Coptic alphabet are of greek origin; ϣ — Ϟ on the other hand signify sounds which either wanted at all in the greek language, or which since the christian era no longer used in writing; they are taken from the older egyptian. This sign ϥ denotes the syllable ti; its prototype is the semitic and greek Tau.</p> <p>The vowels are:</p> <p>Α Ε Ι Ο,</p> <p>the ΟΟ is written by ΟΥ, like in greek; before a consonant it is pronounced by ΟΟ, before a vowel by V. The coptic diphthongs are:</p> <p>ΑΙ ΕΙ ΟΙ</p> <p>pronounced in the sahidic dialect only as ě, ĭ, į, in the memphitic, however, as the german diphthongs ai, ei, oi.</p> <p>READING-SIGNS AND PUNCTUATION.</p> <p>˘ above a letter: the greek gravis.</p> <p>˙ behind a word in sahidic manuscripts: dividing sign.</p> <p>• signifies a greater pause, like our semicolon or point.</p> <p>: signifies a shorter pause, like our comma.</p> <p>— sign of division.</p> <p>— sign of abbreviature above the characters.</p> <p>⏟ graphic sign above some characters in sahidic manuscripts.</p> <p>ˆ diacritic sign behind some words in sahidic manuscripts.</p> <p>, Comma, only in later sahidic manuscripts.</p> <p>• orthographic sign above some characters in memphitic books.</p> <p>NUMERICAL VALUE.</p> <p>The numerical value of the coptic characters is the same as in greek. Numerals are written by — above the letters; the thousands are marked by , below near the letter. ϣ (90) supplies the place of the greek Ϛ (koppa).</p>
Β β	Vida	b v	
Γ γ	Gamma	g	
Δ δ	Dalda	d	
Ε ε	Ei	ě	
Ζ ζ	Zida	z	
Η η	Hida	ĭ	
Θ θ	Thida	th	
Ι ι	Jauda	ĭ	
Κ κ	Kabba	k	
Λ λ	Laula	l	
Υ υ	Mi	m	
Ν ν	Ni	n	
Ξ ξ	Exi	x	
Ο ο	O	o short	
Π π	Pi	p b	
Ρ ρ	Ro	r	
Σ σ	Sima	s	
Τ τ	Dau	t d	
Υ ϣ	He	i, ü Germ.	
Φ φ	Phi	ph	
Χ χ	Chi	ch sc	
Ψ ψ	Ebsi	ps	
Ω ω	O	o long	
ϣ ϣ	Fei	f ph	
Ϟ Ϟ	Hori	h	
Ϡ Ϡ	Chei	kh	
ϡ ϡ	Scei	sh	
Ϣ Ϣ	Giangua	g dsh	
ϣ ϣ	Scima	sk sc gh	
ϥ ϥ	Dei Ligature	ti	
Ϧ Ϧ	So	Cipher 6	

CHINESE.

A calculation, based upon the Imperial Chinese Dictionary, shows that the Chinese language is represented by 43,496 characters or symbols. Of this number 13,000 are totally irrelevant and consist of signs which are obsolete, incorrectly formed, and unexplained. For the expressions in ordinary literature about 4000 signs appear to suffice. The writings of Con-foo-tse (Confucius) and his disciples can even be read by the help of only 2500 characters, and a knowledge of these will enable the student tolerably to understand all Chinese works on history and philosophy. In lieu of the phonetic and lexicographical system, which appertains to most languages, the Chinese have adopted 214 signs any of which, being placed by the side of an unknown character, indicates at once its pronunciation. These indicators of sound, are termed by the Chinese "*Tribunals*". European grammarians have called them "*Keys*" or "*Radicals*". Occasionally the "*Tones*" (modulating accents) are appended at the top or foot of the character, at the right or the left side. Such accents are described as follows,

1  even tone. 2  entering tone. 3  falling tone. 4  rising tone.

The "Keys" are divided into 17 Classes, according to the number of strokes of which each character is composed, and are arranged in the following order:

Class				Class			
1. consisting of 1 stroke extends from Nr. 1—6				10. consisting of 10 strokes extends from Nr.187—194			
2.	"	" 2 strokes	" " " 7—29	11.	"	" 11	" " " 195—200
3.	"	" 3	" " " 30—60	12.	"	" 12	" " " 201—204
4.	"	" 4	" " " 61—94	13.	"	" 13	" " " 205—208
5.	"	" 5	" " " 95—117	14.	"	" 14	" " " 209—210
6.	"	" 6	" " " 118—146	15.	"	" 15	" " " 211
7.	"	" 7	" " " 147—166	16.	"	" 16	" " " 212—213
8.	"	" 8	" " " 167—175	17.	"	" 17	" " " 214
9.	"	" 9	" " " 176—186				

1  <i>yí</i> , one	17.  <i>kǎn</i>	33  <i>s'z</i> , scholar
2  <i>chiěh</i> , perpendicular stroke	18.  <i>tou</i> , knife	34  <i>fanfun</i>
3  <i>tien</i> , point	19.  <i>liě</i> , strength	35  <i>tsieh</i> , slowly
4  <i>piěh</i> , strokeslanting to the left	20.  <i>chwen</i> , equal, triangle	36  <i>dsiěh</i> , evening
5  <i>yi</i> , crooked stroke	21.  <i>pi</i> , spoon	37.  <i>tá</i> , great
6  <i>kiu</i> , hooked stroke	22.  <i>fang</i> , to pull out	38  <i>nü</i> , girl
7.  <i>urh</i> , two	23.  <i>kwah</i> , division between fields	39  <i>tsě</i> , son, child
8.  <i>yitièn-yiwa</i>	24.  <i>shiàh</i> , ten	40.  <i>mou</i> or <i>poěn-an</i> hat
9  <i>jin</i> , man	25.  <i>poh</i> , to divine	41  <i>tsun</i> , inch
10  <i>chàh</i> , foot	26.  <i>tsshi</i>	42.  <i>siou</i> , small
11  <i>shàh</i> , to enter	27.  <i>shi</i> , shelter	43  <i>kang</i> , horrible
12  <i>pah</i> , eight	28.  <i>chee</i> , perverse	44  <i>shi</i> , corpse
13  <i>kwah</i> , desert	29.  <i>yiu</i> , again, moreover	45  <i>tsou</i>
14.  <i>mièn</i> , to cover	30.  <i>kiu</i> , mouth	46  <i>san</i> , mountain
15.  <i>pin</i> , ice	31.  <i>hwei</i> , return	47.  <i>chuěn</i> , stream
16  <i>chi</i> , bench	32.  <i>too</i> , the ground	48.  <i>kòng</i> , artisan, time

- |  |  |   |
|--|--|---|
| 49 己 <sup>°</sup> <i>chi</i> , self          | 73 日 <sup>°</sup> <i>yuěh</i> , to talk      | 97 瓜 <i>kwah</i> , melon                        |
| 50 巾 <sup>°</sup> <i>chin</i> , cloth        | 74 月 <sup>°</sup> <i>yueh</i> , moon         | 98 瓦 <i>wàh</i> , tiles,                        |
| 51 干 <sup>°</sup> <i>kan</i> , shield, spear | 75 木 <sup>°</sup> <i>moh</i> , tree          | earthenware                                     |
| 52 𠂇 <sup>°</sup> <i>yuěh</i> , source       | 76 欠 <sup>°</sup> <i>chièn</i> , debtor      | 99 甘 <sup>°</sup> <i>kan</i> , sweet            |
| 53 户 <sup>°</sup> <i>yin</i> , hut           | 77 止 <sup>°</sup> <i>ts'</i> , to stop       | 100 生 <sup>°</sup> <i>senn</i> , to live, to    |
| 54 𠂇 <sup>°</sup> <i>tsou</i> , long walk    | 78 歹 <sup>°</sup> <i>tie</i> , wicked        | give birth                                      |
| 55 升 <sup>°</sup> <i>kóng</i> , higher       | 79 𠂇 <sup>°</sup> <i>kòh</i> , the young     | 101 用 <sup>°</sup> <i>yòng</i> , to use         |
| 56 弋 <sup>°</sup> <i>yiěh</i> , spear        | of animals                                   | 102 田 <sup>°</sup> <i>tièn</i> , field          |
| 57 弓 <sup>°</sup> <i>kóng</i> , a bow        | 80 毋 <sup>°</sup> <i>f'ó</i> , is not        | 103 疋 <sup>°</sup> <i>piěh</i> , piece          |
| 58 王 <sup>°</sup> <i>kway</i> , Come!        | 81 比 <sup>°</sup> <i>pi</i> , to compare     | 104 疒 <sup>°</sup> <i>tsiěh</i> , sick          |
| 59 𠂇 <sup>°</sup> <i>san</i> , coat          | 82 毛 <sup>°</sup> <i>mou</i> , feather       | 105 𠂇 <sup>°</sup> <i>fàh</i> , to divide       |
| 60 𠂇 <sup>°</sup> <i>shuang-jin</i> , two    | 83 氏 <sup>°</sup> <i>sz</i> , clan           | 106 白 <sup>°</sup> <i>buh</i> , white           |
| men  | 84 气 <sup>°</sup> <i>chi</i> , air           | 107 皮 <sup>°</sup> <i>bi</i> , skin             |
| 61 心 <sup>°</sup> <i>sin</i> , heart         | 85 水 <sup>°</sup> <i>shway</i> , water       | 108 皿 <sup>°</sup> <i>min</i> , implement       |
| 62 戈 <sup>°</sup> <i>kòh</i> , a lance       | 86 火 <sup>°</sup> <i>chaw</i> , fire         | 109 目 <sup>°</sup> <i>mòh</i> , eye             |
| 63 户 <sup>°</sup> <i>w'ōō</i> , inner door   | 87 爪 <sup>°</sup> <i>tsou</i> , claws, nails | 110 矛 <sup>°</sup> <i>maòh</i> , spear          |
| 64 手 <sup>°</sup> <i>sheu</i> , hand         | 88 父 <sup>°</sup> <i>f'òh</i> , father       | 111 矢 <sup>°</sup> <i>shi</i> , arrow           |
| 65 支 <sup>°</sup> <i>tz'</i> , branch        | 89 爻 <sup>°</sup> <i>yow</i> , sign-         | 112 石 <sup>°</sup> <i>shiěh</i> , stone         |
| 66 支 <sup>°</sup> <i>chi</i> , the stalk     | 90 片 <sup>°</sup> <i>chwang</i> , pole       | 113 示 <sup>°</sup> <i>sz</i> , to admonish      |
| 67 文 <sup>°</sup> <i>funn</i> , gentle       | 91 片 <sup>°</sup> <i>pièn</i> , splinter     | 114 肉 <sup>°</sup> <i>nahy</i> or <i>shòh</i> , |
| 68 斗 <sup>°</sup> <i>tou</i> , a measure     | 92 牙 <sup>°</sup> <i>yah</i> , teeth         | clapper of a bell                               |
| 69 斤 <sup>°</sup> <i>chin</i> , hatchet,     | 93 牛 <sup>°</sup> <i>niù</i> , ox            | 115 禾 <sup>°</sup> <i>hau</i> , grain           |
| pound  | 94 犬 <sup>°</sup> <i>chu.ěh</i> , dog        | 116 穴 <sup>°</sup> <i>yuěh</i> , cave           |
| 70 方 <sup>°</sup> <i>fang</i> , a square,    | 95 玄 <sup>°</sup> <i>yuěh</i> , intermin-    | 117 立 <sup>°</sup> <i>liě</i> , to stand        |
| then   | able   | 118 竹 <sup>°</sup> <i>choh</i> , bamboo         |
| 71 无 <sup>°</sup> <i>f'ě</i> , no            | 96 玉 <sup>°</sup> <i>niòh</i> , gem          | 119 米 <sup>°</sup> <i>mi</i> , rice             |
| 72 日 <sup>°</sup> <i>shěh</i> , sun, day     |  | 120 糸 <sup>°</sup> <i>s'z</i> , silk            |

121 缶。 <i>f'ow</i> , jar	145 衣。 <i>i</i> , clothing	169 門。 <i>mun</i> , a door
122 网。 <i>kang</i> , hedge	146 兩。 <i>yü</i> , twilight	170 阜。 <i>fou</i> , a mound
123 羊。 <i>yang</i> , sheep	147 見。 <i>chièn</i> , to see	171 隸。 <i>di</i> , to accomplish
124 羽。 <i>ü</i> , long feathers	148 角。 <i>krih</i> , horn, corner	172 佳。 <i>chiah</i> , fine
125 老。 <i>laò</i> , old	149 言。 <i>nièn</i> , word	173 雨。 <i>yü</i> , rain
126 而。 <i>urh</i> , and	150 谷。 <i>kòh</i> , apertures in rocks	174 青。 <i>tsin</i> , green
127 耒。 <i>lie</i> , handle of a spade	151 豆。 <i>tou</i> , head	175 非。 <i>feeh</i> , not
128 耳。 <i>ull</i> , the ear	152 豕。 <i>shü</i> , swine	176 面。 <i>mièn</i> , face
129 聿。 <i>yuèh</i> , to manifest, a baton	153 豸。 <i>chi</i> , superior order of animals	177 革。 <i>kèh</i> , leather
130 肉。 <i>jòh</i> , flesh	154 貝。 <i>pèi</i> , valuables	178 韋。 <i>hway</i> , high
131 臣。 <i>chin</i> , an official	155 赤。 <i>chèh</i> , red	179 韭。 <i>chiu</i> , leeks
132 自。 <i>ts'z</i> , from oneself	156 走。 <i>tsou</i> , to walk	180 音。 <i>yin</i> , a sound, tone
133 至。 <i>tsz</i> , to arrive, extreme	157 足。 <i>tsòh</i> , leg	181 頁。 <i>hièh</i> , a sheet, a leaf
134 臼。 <i>chiu</i> , mortar	158 身。 <i>shin</i> , body	182 風。 <i>fong</i> , wind
135 舌。 <i>chweh</i> , tongue	159 車。 <i>chü</i> , cart	183 飛。 <i>fee</i> , to fly
136 舛。 <i>chiah</i> , strong	160 辛。 <i>sin</i> , bitter, hardships	184 食。 <i>shèh</i> , to eat
137 舟。 <i>chiu</i> , vessel	161 辰。 <i>jèn</i> , an hour, azure	185 首。 <i>sheu</i> , head
138 艮。 <i>kun</i> , inferior order of nature	162 彳。 <i>tseu</i> , to run	186 香。 <i>shiang</i> , scent
139 色。 <i>sèh</i> , colour	163 邑。 <i>jě</i> , a town	187 馬。 <i>máa</i> , horse
140 艸。 <i>tsaò</i> , grass	164 酉。 <i>yoo</i> , twilight	188 骨。 <i>kwùh</i> , bones
141 虍。 <i>'hoo</i> , tiger	165 采。 <i>tsie</i> , to separate	189 高。 <i>kaò</i> , high
142 虫。 <i>chóng</i> , insects	166 里。 <i>li</i> , one third of a mile	190 髟。 <i>kaò</i> , whiskers, beard
143 血。 <i>shwèh</i> , blood	167 金。 <i>chin</i> , gold, metal	191 鬥。 <i>tou</i> , to fight
144 行。 <i>jèn</i> , to walk, to act	168 長。 <i>chang</i> , long	192 鬯。 <i>chang</i> , sweet wine

193 𩚑。 <i>lièh</i> , to cup open	201 黃。 <i>hwang</i> , yellow	208 鼠。 <i>chü</i> , rat
194 鬼。 <i>kway</i> , devil	202 黍。 <i>shü</i> , millet	209 鼻。 <i>pièh</i> , nose
195 魚。 <i>nü</i> , fish	203 黑。 <i>hěh</i> , black	210 齊。 <i>tsi</i> , to put in order, equal
196 鳥。 <i>niào</i> , bird	204 黻。 <i>chi</i> , embroidery	211 齒。 <i>ts'z</i> , the back teeth
197 鹵。 <i>loo</i> , brine	205 黽。 <i>min</i> , a toad	212 龍。 <i>long</i> , dragon
198 鹿。 <i>lòh</i> , stag	206 鼎。 <i>tin</i> , tripod	213 龜。 <i>kway</i> , tortoise
199 麥。 <i>mèh</i> , wheat	207 鼓。 <i>koo</i> , drum	214 箏。 <i>yàh</i> , a musical instrument
200 麻。 <i>má</i> , hemp		

## ARITHMETICAL FIGURES.

All arithmetical combinations are performed by 17 Cardinal figures. In the subjoined table, three different forms of numerical characters are given. The series in the left column represents the *plain hand* which serves for literary and ordinary purposes. In the middle column *words* are employed instead of figures. This class is used in bonds, contracts etc., where it is of importance to guard against alterations and fraud. The figures in the right column, written in a "running hand", are used by merchants and traders in keeping their business accounts.

一 壹。   <i>yě</i> , 1	十 拾。 <i>shìah</i> , 10
二 貳。    <i>urh</i> , 2	百 百。 <i>pěh</i> , 100
三 參。 川 <i>san</i> , 3	千 千。 <i>tsièn</i> , 1000
四 肆。 𠄎 <i>s'z</i> , 4	萬 万。 <i>van</i> , 10,000
五 伍。 𠄎 <i>oo</i> , 5	億 億。 <i>ee</i> , 100,000
六 陸。 𠄎 <i>loh</i> , 6	兆 兆。 <i>chaò</i> , 1,000,000
七 柒。 𠄎 <i>tsiě</i> , 7	京 京。 <i>chin</i> , 10,000,000
八 捌。 𠄎 <i>pàh</i> , 8	垓 垓。 <i>nyàh</i> , 100,000,000
九 玖。 文 <i>chew</i> , 9	

The numbers by which 10, 100 etc. are multiplied are placed at the top of the multiplicand. The numbers added to ten etc., are marked below the figure.

Example + ten.  $\begin{array}{c} \text{二} \\ + \\ \text{二} \end{array}$  twice ten and two, or 22.

## JAPANESE

IN THE KATA-KANA CHARACTER.

(This type was cut under the direction of Prof. J. HOFFMAN of Leyden and cast by N. TETTERODE in Rotterdam.)

I-RO-FA (A b c).		THE JAPANESE ALPHABET organically arranged.*		
25 井 yi	1 イ i	1 ア a	25 セ se	49 バ ba
26 ノ no	2 ロ ro	2 ワ wa	26 ゼ ze	50 パ pa
27 オ o	3 ハ fa, va	3 エ e	27 シ si	51 ヘ fe
28 ク ku	4 ニ ni	4 イ i	28 ジ zi	52 ベ be
29 ヤ ya	5 フ fo	5 オ o	29 ソ so	53 ペ pe
30 マ ma	6 ヘ fe, ve	6 ヲ wo	30 ゾ zo	54 ヒ fi
31 ケ ke	7 ト to	7 ウ u	31 ス su	55 ビ bi
32 フ fu	8 チ tsi	8 ヤ ya	32 ズ zu	56 ピ pi
33 コ ko	9 リ ri	9 エ ye	33 タ ta	57 フ fo
34 エ ye	10 ヌ nu	10 井 yi	34 ダ da	58 ボ bo
35 テ te	11 ル ru	11 ヨ yo	35 テ te	59 ポ po
36 ア a	12 ヲ wo	12 ュ yu	36 デ de	60 フ fu
37 サ sa	13 ワ wa	13 カ ka	37 チ tsi	61 ブ bu
38 キ ki	14 カ ka	14 ガ ga	38 チ dsi	62 プ pu
39 ュ yu	15 ヨ yo	15 ケ ke	39 ト to	63 ナ na
40 メ me	16 ダ da	16 ゲ ge	40 ド do	64 ニ ne
41 ミ mi	17 レ re	17 キ ki	41 ツ tsu	65 ニ ni
42 シ si	18 ソ so	18 ギ gi	42 ヅ dsu	66 ノ no
43 エ e	19 ツ tsu	19 コ ko	43 マ ma	67 ヌ nu
44 ヒ fi, vi	20 子 ne	20 ゴ go	44 メ me	68 ニ n
45 モ mo	21 ナ na	21 ク ku	45 ミ mi	69 ラ ra
46 セ se	22 ラ ra	22 グ gu	46 モ mo	70 レ re
47 ス su	23 ム mu	23 サ sa	47 ム mu	71 リ ri
	24 ウ u	24 ザ za	48 ハ fa	72 ロ ro
				73 ル ru

\* The accent *nigori*, consisting of two minute marks at the right of the syllable, softens the consonant. The accent *maru*, a dot likewise at the right, hardens the consonant. By the addition of these marks and the *n*, unattended by a vowel, the letters originally 47, are raised to the number of 73.

## ABBREVIATIONS AND ORTHOGRAPHICAL SIGNS.

ㄱ koto. ㄴ goto. ㄷ site. ㄹ tama.

ゝ Sign of doubling a letter, placed in the middle line.

ゞ Sign of doubling a syllable.

ゝ Sign of lengthening a vowel.

。 Full stop. ٫ comma, towards the right, beyond the middle line.

## SANSKRIT

## CONSONANTS.

Each consonant is sounded with an inherent short *a*.

## GUTTURALS.

क	ka
ख	kha
ग	ga
घ	gha
ङ	ṅa

## LABIALS.

प	pa
फ	pha
ब	ba
भ	bha
म	ma

## PALATALS.

च	cha
छ	ch'ha
ज	ja
झ	j'ha
ञ	ña

## SEMI-VOWELS.

य	ya
र	ra
ल	la
व	va

## CEREBRALS.

ट	ṭa
ठ	ṭha
ड	ḍa
ढ	ḍha
ण	ṇa

## SIBILANTS AND ASPIRATES.

श	sha
ष	sh'ha
स	sa
ह	ha

## DENTALS.

त	ta
थ	tha
द	da
ध	dha
न	na

ळ ॠ

This character peculiar to the Rig-Veda has a sound which partakes of *l* and *r*. It stands for the cerebral *ḍa*. When it represents the aspirate of this letter, it is expressed by ॡ (*tha*).

## ADDITIONAL SIGNS.

- Virâma (pause) is placed under a final consonant, and denotes the absence of the inherent short *a*.
- | indicates the close of a sentence, ending in a vowel, a diphthong or a visarga. In poetry it denotes the half of a verse. At the end of a verse or a period this mark is doubled ||.
- ᳚ serves 1. as the sign of hiatus, 2. as sign of the elision of *a* after *e* and *o*, 3. as the sign of coalescence of two *a*.
- o is the sign of abbreviation.
- ᳚ and ᳚ represent the letter *r*. The former sign is pronounced before the consonant (and the semivowel *ri*) at the top of which it is placed; the latter sign is placed under the consonant and sounded after it.

## VOWELS.

The vowels in the left row are uttered as initials or are placed before their consonants. The vowel-signs in the right division being medials and finals, coalesce with their consonants, and are respectively placed over, under, before and after the letters.

अ	a
आ	â
इ	i
ई	î
उ	u
ऊ	û
ऋ	r
ॠ	ṛ
ऌ	l
ॡ	ḷ

## COALESCENT VOWELS.

।	â follows the consonant
ि	i precedes " "
े	î follows " "
ु	u under " "
ँ	û " " "
ॢ	r " " "
ॣ	ṛ " " "
।	l " " "
॥	ḷ " " "
०	e over " "
ॡ	ai " " "
ॢ	o follows " "
ॣ	au " " "

## DIPHTHONGS.

ए	e
ऐ	ai
ओ	o
औ	au

## NASAL SOUNDS.

. Anusvâra and ॠ Anunāsika, are substitutes for *m* and *n*. The anunāsika has its place above the letter or laterally with virama underneath.

ः ḥ (or properly ॡ) visarga, + jihvāmūliya and ॡ upadhmāniya,

are strong final aspirates. The visarga which is the substitute for *s* and *r* is the only one in common use. The last two signs bear also the common designation of ardhavisarga.

## PROSODIAL MARKS.

| denotes brevity, ᳚ length.

## ACCENTS.

- Anudâta or grave accent stands under the vowel.
- ˘ Śvarita or circumflex is put over the vowel.
- In connexion with these marks the numerals १ and ३ serve as accents.

## NUMERALS.

१	२	३	४	५	६	७	८	९	०
1	2	3	4	5	6	7	8	9	0

## SANSKRIT

The similarity of shape occasions mistakes in correcting proofs; it may therefore be of advantage both to compositors and readers of proofs to make use of the annexed numbers of reference. The form of the subjoined Alphabet differs from that which precedes, but is superior in point of correctness.

1 अ	a	27 ॠ	re(with Acc.)	53 क्य	kya	79 ङ्क	ńka
2 आ	â	28 ॡ	ai(with Acc.)	54 क्र	kra	80 ङ्क	ńkta
3 इ	i	29 ॢ	raiñ	55 क्र	kra	81 ङ्क	ńkya
4 ई	î	30 :		56 क्ल	kla	82 ङ्क	ńksha
5 उ	u	31 •		57 क्व	kva	83 ङ्क	ńkha
6 ऊ	û	32 ॣ		58 क्श	ksha(x)	84 ङ्क	ńkhya
7 ऋ	ri	33 ।	Accents and other orthographical signs.	59 क्श्	ksh	85 ङ्क	ńga
8 ॠ	ri	34 ॥		60 क्श्म	kshma	86 ङ्क	ńgya
9 ऌ	li	35 ०		61 क्श्या	kshya	87 ङ्क	ńgha
10 ॡ	li	36 -		62 क्श्व	kshva	88 ङ्क	ńghya
11 ए	e	37 ऽ		63 ख	kha	89 ङ्क	ńghra
12 ऌ	â	38 ः		64 ख	kh	90 ङ्क	ńña
13 ऩ	i	39 ॵ		65 ख्य	khya	91 च	cha (ća)
14 ऱ	î	40 ॶ		66 ग	ga	92 च	ch (ć)
15 ॡ	ri	41 -		67 ग	g	93 च	ćca
16 ॣ	u	42 ।		68 ग्न	gna	94 छ	ćcha
17 ॣ	û	43 ७		69 ग्न्य	gnya	95 च	ćña
18 ॣ	ri	44 ८		70 ग्न	gra	96 च	ćma
19 ॣ	ri	45 ९		71 ग्न्य	grya	97 च	ćya
20 ॣ	li	46 क	ka	72 घ	gha	98 छ	ćha
21 ॣ	li	47 क्क	kka	73 घ	gh	99 छ	ćhra
22 ॣ	e	48 क्त	кта	74 घ्न	ghna	100 ज	ja
23 ॣ	ai	49 क्त्य	کتيا	75 घ्नम	ghma	101 ज	j
24 ॣ	o	50 क्तव	کتوا	76 घ्न्य	ghya	102 ज्ञ	jja
25 ॣ	e(with Acc.)	51 क्क	kna	77 घ्न	ghra	103 ज्ञ	jña
26 ॣ	re	52 क्कम	kma	78 ङ	ńa	104 ङ	jñ

## SANSKRIT

105	झ	jha	133	ण्ड	ṇdra	161	थ	th	189	ध्य	dhya
106	ज्य	jya	134	ण्ड्र	ṇdrya	162	थ्य	thya	190	घ्र	dhra
107	ज्र	jra	135	णढ	ṇḍha	163	द	da	191	घ्व	dhva
108	ज्व	jva	136	ण	ṇṇa	164	दु	du	192	न	na
109	ज्ञ	jha	137	णय	ṇya	165	दू	dû	193	न्	n
110	भ	jha	138	णव	ṇva	166	ह	ḍri	194	न्त	nta
111	ञ	ña	139	त	ta	167	झ	dga	195	न्त्य	ntyā
112	उ	ñ	140	त	t	168	झ	dgha	196	न्त्र	ntra
113	ञ्च	ñca	141	त्क	tka	169	ह	dda	197	न्द	nda
114	ञ्ज	ñja	142	त्त	tta	170	हू	ddba	198	न्द्र	ndra
115	ट	ṭa	143	त्त्य	ttya	171	झ्य	ddya	199	न्ध	ndha
116	ट्क	ṭka	144	त्त्र	ttra	172	झ	ddha	200	न्ध्र	ndhra
117	ट्ट	ṭṭa	145	त्त्व	ttva	173	झ्य	ddhya	201	न्न	nna
118	ट्या	ṭya	146	त्न	tna	174	झ	dna	202	न्न	npra
119	ठ	ṭha	147	त्प	tpa	175	झ	dba	203	न्फ	npha
120	ठ्य	ṭhya	148	त्प्र	tpra	176	झ	dbra	204	न्फ्र	nphra
121	ठ्ठ	ṭhra	149	त्फ	tpha	177	झ	dbha	205	न्म	nma
122	ड	ḍa	150	त्फ्र	tphra	178	झ	dbhya	206	न्य	nya
123	ड्ड	ḍḍa	151	त्म	tma	179	झ	dma	207	न्स	nsa
124	ड्ठ	ḍṭa	152	त्म्य	tmya	180	घ	dya	208	प	pa
125	ढ	ḍha	153	त्य	tya	181	द्र	dra	209	प्	p
126	ढ्य	ḍhya	154	त्र	tra	182	घ्र	drya	210	प्ता	pta
127	ढ्र	ḍhra	155	त्र्य	trya	183	घ्व	dva	211	प्ता	pna
128	ण	ṇa	156	त्व	tva	184	घ्य	dvya	212	प्प	ppa
129	ण	ṇ	157	त्स	tsa	185	घ	dha	213	प्प	pma
130	ण्ट	ṇṭa	158	त्सन्	tsna	186	ध	dh	214	प्य	pya
131	ण्ड	ṇṭha	159	त्स्य	tsya	187	ध्र	dhna	215	प्र	pra
132	ण्ड	ṇḍa	160	थ	tha	188	ध्म	dhma	216	प्ल	pla

## SANSKRIT

217	प	pva	245	य	ya	273	श्र	çra	301	स्म	sma
218	प्स	psa	246	र	y	274	श्च	çla	302	स्म्य	smya
219	फ	pha	247	च	y	275	श्च	çva	303	स्य	sya
220	ब	ba	248	य्य	yya	276	श्श	çça	304	स्र	sra
221	ठ	b	249	र	ra	277	ष	sha	305	स्व	sva
222	ब्ध	bgha	250	रु	ru	278	ष	sh	306	स्स	ssa
223	ब्ज	bja	251	रु	rû	279	ष्ट	shṭa	307	ह	ha
224	ब्द	bda	252	ल	la	280	ष्ट्य	shṭya	308	ह	h
225	ब्ध	bdha	253	ल	l	281	ष्ट्र	shṭra	309	ह	hri
226	ब्ब	bba	254	ल्क	lka	282	ष्ट्र्य	shṭrya	310	ह्र	hṇa
227	ब्भ	bbha	255	ल्प	lpa	283	ष्ट्र्य	shṭrya	311	ह्र	hna
228	ब्र	bra	256	ल्म	lma	284	ष्टु	shṭva	312	ह्र	hma
229	भ	bha	257	ल्य	lya	285	ष्ट	shṭha	313	ह्र	hya
230	भ	bh	258	ल्ल	lla	286	ष्ण	shṇa	314	ह्र	hra
231	भ्य	bhya	259	ल्व	lva	287	ष्प	shpa	315	ह्र	hla
232	भ्र	bhra	260	व	va	288	ष्प्र	shpra	316	ह्र	hva
233	भव	bhva	261	ठ	v	289	ष्म	shma	317	ठ	ṭ
234	म	ma	262	व	v	290	ष्य	shya	318	ह्र	ṭha
235	म्	m	263	व्य	vya	291	स	sa	319	१	1
236	म्र	mna	264	व्र	vra	292	स्	s	320	२	2
237	म्प	mpa	265	व्व	vva	293	स्क	ska	321	३	3
238	म्प्र	mpra	266	श्	ça	294	स्व	skha	322	४	4
239	म्ब	mba	267	श्च	ça	295	स्त	sta	323	५	5
240	म्भ	mbha	268	श्	ç	296	स्त्र	stra	324	६	6
241	म्य	mya	269	श्	ç	297	स्थ	stha	325	७	7
242	म्र	mra	270	श्च	çça	298	स्न	sna	326	८	8
243	म्ल	mla	271	श्च्य	ççya	299	स्प	spa	327	९	9
244	मस	msa	272	श्च	çna	300	स्फ	spha	328	०	0

# TAMIL

The Tamil language was earlier cultivated than the other members of the Dravidian family. It includes two dialects the (ancient) *Shen-Tamil* and the (modern) *Kodun-Tamil*. Tamil is spoken throughout the plain of the Carnatic, below the ghats from Pulicat to cape Comorin, to the neighbourhood of Trivandrum; also in the northern and western part of Ceylon where in ancient times Tamilians established their settlements. This language has 12 vowels and 18 consonants. It is read from left to right.

## SHORT VOWELS.

அ	a	as in America
இ	i	» » fill
உ	u	» » full
எ	e	» » self
ஓ	o	» » long

## THE CORRESPONDING LONG VOWELS.

ஆ	â	in ah
ஈ	î	» feel
ஊ	û	» foo
ஏ	ê	» they
ஔ	ô	» sole

## DIPHTHONGS.

ஐ	ey	in eye
ஔ	ou	» foul

## CONSONANTS.

க	k	
ங	ñ	ng in long
ச	s	
ஞ	ñ	as gn in french <i>règne</i>
ட	t	like t d of Sanscrit cerebrals
ண	ṇ	like n of Sanscrit cerebral
த	t	
ந	n	in no
ப	p	
ம	m	
ற்	r	rolled, partly like a cerebral, partly like a dental
ன்	ṇ	as in on

## LIQUIDS.

ய	y	as in yes
ர	r	» » round
ல்	l	» » lap
வ	v	
ள்	l	hard, it is of cerebral character
ழ	l	intermediate between r and l.

The consonants have been divided into *rough*, *soft* and *intermediate* sounds. The first class includes the *tenues* (க, ச, ட, த, ப, ம). The second class contains the corresponding Nasals. The third class contains the Liquids. A dot placed at the top of a consonant indicates the absence of a vowel, but is omitted in native MSS.

The following rules are to be noticed in the pronunciation.

a) Short *a*, before the soft letters ன், ண், the intermediate letters ற், ல், ள், ழ், and at the end of polysyllabic words, sounds like *e* in men.

b) Combined with a preceding ற் it receives the same sound.

c) The vowels *e* and *ê* as initials are pronounced as if *y* were placed before them.

d) The vowels *i* (î) and *e* (ê) before linguals (ட, ண் and ள், ழ் and ழ்) are respectively articulated somewhat deeper than the French *u* and *eu*.

e) The consonants க, த, ப are only hardened as initial letters, or when doubled in the middle of a word. The same is the case with ட which does not occur as an initial in pure Tamil words.

f) When க, ட, த, ப occur as medials of a word, க sounds like *ch*, ப like *b*, த like *th*, and ட like the Sanscrit cerebral *d*.

g) ச is always sharply hissed like *ss*. When the nasal ஞ precedes, it coalesces with it and sounds like *ng* (in *angel*). When doubled after ட, or ழ, it sounds like *ch* (in *church*).

h) *e* and *y* at the end of a syllable have an intermediate sound of *i* (in *vine*) and *ai* (in *vain*).

i) Double ழ sounds like *tt*. After the corresponding nasal ன், it may be pronounced like *d*.

The Tamil Alphabet being syllabic, a word is divisible in any part, so long as the consonant remains united with its vowel. In punctuation the full stop alone is employed.

The vowels, in their separate forms, are only used as initials. The following table shows their mode of coalition with the consonants. The short *a*, as in Sanscrit, is not expressed before a consonant.

	a	ā	i	ī	u	ū	e	ē	ey	o	ō	au
	அ	ஆ	இ	ஈ	உ	ஊ	எ	ஏ	ஐ	ஓ	ஔ	ஒள
k	க	கா	கி	கீ	கு	கூ	கெ	கே	கை	கொ	கோ	கௌ
ṅ	ங											
s	ச	சா	சி	சீ	சு	சூ	செ	சே	சை	சொ	சோ	சௌ
ṇ	ஞ	ஞா	ஞி	ஞீ	ஞு	ஞூ	ஞெ	ஞே	ஞை	ஞொ	ஞோ	ஞௌ
t	ட	டா	டி	டீ	டு	டூ	டெ	டே	டை	டொ	டோ	டௌ
ṇ	ண	ணா	ணி	ணீ	ணு	ணூ	ணெ	ணே	ணை	ணொ	ணோ	ணௌ
t	த	தா	தி	தீ	து	தூ	தெ	தே	தை	தொ	தோ	தௌ
ṇ	ந	நா	நி	நீ	நு	நூ	நெ	நே	நை	நொ	நோ	நௌ
p	ப	பா	பி	பீ	பு	பூ	பெ	பே	பை	பொ	போ	பௌ
m	ம	மா	மி	மீ	மு	மூ	மெ	மே	மை	மொ	மோ	மௌ
y	ய	யா	யி	யீ	யு	யூ	யெ	யே	யை	யொ	யோ	யௌ
r	ர	ரா	ரி	ரீ	ரு	ரூ	ரெ	ரே	ரை	ரொ	ரோ	ரௌ
l	ல	லா	லி	லீ	லு	லூ	லெ	லே	லை	லொ	லோ	லௌ
v	வ	வா	வி	வீ	வு	வூ	வெ	வே	வை	வொ	வோ	வௌ
!	ழ	ழா	ழி	ழீ	ழு	ழூ	ழெ	ழே	ழை	ழொ	ழோ	ழௌ
l	ள	ளா	ளி	ளீ	ளு	ளூ	ளெ	ளே	ளை	ளொ	ளோ	ளௌ
r	ற	றா	றி	றீ	று	றூ	றெ	றே	றை	றொ	றோ	றௌ
n	ன	னா	னி	னீ	னு	னூ	னெ	னே	னை	னொ	னோ	னௌ

#### ADDITIONAL LETTERS AND CONTRACTIONS.

ஷ்	ஷ	ஷி	ஷீ	ஸ்	ஸ	ஃ	மூ	ஹு	உ
sh	shā	shī	shî	s	sā	ch	Month	Year	Om a sacred word

#### NUMERALS.

க	உ	ந	ச	ரு	கூ	எ	அ	க	ய	ந	சூ
1	2	3	4	5	6	7	8	9	10	100	1000

Examples of compound numbers, ஷக = 11, ஷஉ = 12 etc.

## ZEND

## BURMESE

FORM	SOUND	FORM	SOUND
𑖀	a	𑖄	z
𑖁	à	𑖅	ñ
𑖂	i	𑖆	t
𑖃	î	𑖇	t̃
𑖄	u	𑖈	th
𑖅	ù	𑖉	d
𑖆	e (e)	𑖊	dh
𑖇	è	𑖋	n
𑖈	ê	𑖌	p
𑖉	o	𑖍	f
𑖊	ò	𑖎	b
𑖋	ào	𑖏	m
𑖌	an̄	𑖐	y initial
𑖍	k	𑖑	y medial
𑖎	kh	𑖒	r
𑖏	q	𑖓	v initial
𑖐	g	𑖔	v medial
𑖑	gh	𑖕	w
𑖒	n̄	𑖖	ç
𑖓	c̄ (ch)	𑖗	sh
𑖔	j	𑖘	s
𑖕	sh	𑖙	h

## PUNCTUATION.

. ° ..

VOWELS			
FORM	SOUND	FORM	SOUND
ဒ	a	ဇ	è
ဒာ	â	ဒဲ	ey
ဒီ	ie	ဇွာ	ǎü
ဒွ	ee	ဇွာ	au
ဇု	u o	ဒံ	ǎñ
ဇွ	û õõ	ဒံး	âh
CONSONANTS			
က	k	ဒ	d
ခ	kh	ဇ	dh
ဂ	g	ဗ	n
ဃ	gh	ပ	p
င	ng & gn	ဖ	ph
စ	ch	တ	b
ဆ	chh	တ	bh
ဇ	j	မ	m
ည	jh	ယ	y
ဉ	ñ	ရ	r
တ	t̃	လ	l
ထ	th	ဝ	w
ဒ	d̃	သ	s
ဌ	dh	ဟ	h
ဏ	n̄	င	t̃
တ	t	ဒံ	an̄
ထ	th		

# CANARESE (CARNÀTACA).

This language, belonging to the Dravidian family, is spoken throughout the plateau of Mysore, in some of the western districts of the Nizam territory, and in the district of Canara on the Malabar coast.

ಅ	a	ಎ	ê	ಒ	nga	ತ	ta	ಯ	ya
ಆ	â	ಐ	ai	ಚ	cha	ಥ	tha	ರ	ra
ಇ	i (ee)	ಒ	o	ಛ	chha	ದ	da	ಲ	la
ಈ	î (ēē)	ಓ	ô	ಜ	ja	ಧ	dha	ವ	va
ಊ	u (oo)	ಔ	au	ಝ	jha	ನ	na	ಶ	sa
ಉ	û (ōō)	ಁ	ñ	ಞ	ñna	ಪ	pa	ಷ	sha
ಋ	r	ಃ	h	ಟ	t'a	ಫ	pha	ಸ	za
ೠ	r'	ಕ	ka	ಠ	t'ha	ಬ	ba	ಹ	ha
ೡ	l	ಖ	kha	ಡ	d'a	ಭ	bha	ಳ	la
ೢ	l'	ಗ	ga	ಢ	d'ha	ಮ	ma	ಱ	sha
ಎ	e	ಘ	gha	ಙ	n'a				

## LIGATURES

ಕೆ	ki	ಞು	ñu	ದಾ	dâ	ನ್ನ	nna	ವಾ	vâ
ಕು	ku	ದೆ	d'e	ದಿ	di	ಪು	pu	ವು	vu
ಕೊ	kô	ದೊ	d'o	ದೊ	dî	ಪು	pra	ವು	vû
ಕ್ಷೆ	ksha	ತಿ	ti	ದೆ	de	ಬ್ಲು	bhu	ವಿ	vî
ಗಾ	ga	ತೀ	tî	ದ್ರಿ	dri	ಮ್ಮ	mma	ವಿ	vî'
ಗಿ	gî	ತು	tu	ನ	n	ರಾ	râ	ವಿ	vai
ಗು	gu	ತೆ	te	ನಾ	nâ	ರೆ	re	ವು	vvu
ಗೆ	ge	ತೈ	tai	ನಿ	ni	ಲಾ	lâ	ಷಾ	shâ
ಗೊ	gê	ತ್ತು	ttu	ನಿ	nî	ಲಾ	lû	ಷ	sht'a
ಗೈ	gai	ತ್ತೆ	tte	ನು	nu	ಲೊ	lô	ಹೊ	hô
ಞಾ	ñâ	ತ್ರ	tra	ನೆ	ne	ವ	va		

# GUJERATI OR GUZERATTEE.

This Alphabet is derived from the Sanscrit (Devanagari) characters, from which it principally differs in the omission of the connecting lines. Gujarati is spoken in the province of Gujarat (Guzerat), especially by the Parsee inhabitants, and is considered to be the mercantile language of Western India. In modern times various Gujarati publications have appeared in Bombay.

અ	ઁ	ચ	cha	ત	ta	ભ	bha
આ	ઐ	છ	chha	થ	tha	મ	ma
ઈ	ઊ	જ	ja	દ	da	ન	na
ઉ	ઋ	ઝ	jha	ધ	dha	વા	va
ૈ	ૌ	ટ	t'a	ના	na	લા	la
ફ	ક	ઠ	t'ha	પ	pa	રા	ra
ગ	ખ	ડ	d'a	પ્હ	pha	સ	sa
ઘ	ઙ	ઢ	d'ha	બ	ba	ઞ	ça
ઙ	ઞ	ણ	n'a			હ	ha

## LIGATURES

કિ	જિ	ન'િ	નું	વુ
કુ	જુ	ન'ન	પિ	વું
કઠ	જઠ	ન'ઠ	પુ	લિ
કિ	જિ	તિ	પુ	લુ
કિ	જિ	તુ	પિ	લું
કિ	જિ	તુ	પિ	રિ
કિ	જિ	તુ	પિ	રુ
કિ	જિ	તુ	પિ	રું
કિ	જિ	તુ	પિ	સિ
કિ	જિ	તુ	પિ	સુ
કિ	જિ	તુ	પિ	સું
કિ	જિ	તુ	પિ	ઞિ
કિ	જિ	તુ	પિ	ઞુ
કિ	જિ	તુ	પિ	ઞું
કિ	જિ	તુ	પિ	હિ
કિ	જિ	તુ	પિ	હુ
કિ	જિ	તુ	પિ	હું

# TELUGU

one of the branches of the Dravidian stock, is spoken along the eastern coast of India from the neighbourhood of Pulicat to Chicacole. Inland it extends to the eastern boundary of the Maratha Country and Mysore, including within its range the ceded districts and Kurnool, the greater part of the territories of the Nizam, the Hyderabad Country and a portion of the Nagpore Country. This language is spoken by about 14 millions.

అ a	ఎ ê	ఁ nga	త ta	ర ra
ఆ â	ఏ ě	చ cha	థ tha	ల la
ఇ i (ee)	ఒ o	ఛ chha	ద da	వ va
ఈ î (ēē)	ఓ ô	జ ja	ధ dha	శ sa
ఉ u (oo)	ఔ uo	ఝ jha	న na (soft)	ష sha
ఊ ū (ōō)	ఁ ñ	ఞ nya	ప pa	స sa
ఋ ṛ	ః ḥ	ట t'a	ఫ pha	హ ha
ౠ ṛ'	క ka	ఠ t'ha	బ ba	ళ ḷa
ఌ i	ఖ kha	డ d'a	భ bha	ఱ sha
ౡ i'	గ ga	ఢ d'ha	మ ma	ఁ Pause
ఏ e	ఘ gha	ణ n'a (hard)	య ya	

## LIGATURES

కా kâ	ఝా jhâ	మా mâ	తి ti	లి l, li
కు ku	ఞ్చా jhî	మి mi	తీ tî	లు lu
కూ kû	ఞ్చూ jhû	ము mu	తు tu	లో lo
కొ ko	ఞ్చొ ñâ	మె me	తే te	లొ lla
క్షా ksha	ఞ్చొ nu	మొ mo	త్తు ttu	లొ lli
గె ge	నా nâ	మ్ము mmu	త్రా tra	వా vâ
గే gē	ని ni	యా yâ	దా dâ	వు vu
గౌ gau	నీ nî	యి yi	ది dî	వె ve
ఘా ghâ	ను nu	యె ye	దు du	వు vva
ఘు ghu	నే ne	యొ yo	దె de	వు vvu
ఘౌ ghû	న్నా nna	రా râ	దొ do	సి si
జా ngâ	పో po	రి ri	డదు ddu	షా shâ
జొ ngu	ప్పు ppu	ఞ్చొ ñû	ధా ddhâ	షా sht'a
చి chi	బా bâ	తే t'e	ధా dhâ	సా sâ
చు chu	బు bu	దు d'u	రీ rî	సా ssâ
చే che	భా bhâ	దు d'hu	రు ru	

BENGALI.

This Alphabet is based on the Devanagari character. In some instances the circular shape has been altered into an angular form, in others the form has been entirely changed. The Bengali language is less mixed than the neighbouring idioms.

VOWELS.		CONSONANTS.				THE VOWELS sounded after the consonants take their position before, after above and below their letters. They receive in such cases the following forms.
অ a	ৗ lri	ক ka	ঙ ña	খ dha	ল la	
আ á	৘ lri	খ kha	ট ta	ন na	ব va	ৗá follows its cons.
ই i	এ e	গ ga	ঠ tha	প pa	শ sha	ি i precedes " "
ঈ í	ঐ ai	ঘ gha	ড da	ফ pha	স sa	ী í follows " "
উ u	ও o	ঙ nga	ঢ dha	ব ba	ষ sha	ৗ u is subjoined
ঊ ú	ঔ au	চ tsha	ণ na	ভ bha	হ ha	ৗ ú " "
ঋ ri	অং ang	ছ tshha	ত ta	ম ma	ক্ষ khya	< ri " "
ঌ rí	অঃ ah	জ ja	থ tha	য ya		≤ rí " "
		ঝ jha	দ da	র ra		ৗ e precedes

OBSERVATIONS.

The vowel-sound of the short a is inherent in all consonants.

ৗ (birám) subjoined to a consonant causes the a to drop. A consonant moreover loses its a by being attached to the following consonant.

ৗ denotes y affixed to a consonant.

ৗ denotes r. It is placed at the top of the letter, and sounded before it.

ৗ r stands under a consonant and is pronounced after it.

ৗ over a consonant, represents its nasal sound.

ৗ denotes the word Ganesh.

ৗ denotes the name of God.

ৗ serves as a stop at the end of a sentence.

ৗ take the cons. in the middle.

ৗ take the cons. in the middle.

ৗ ang follows the cons.

ৗ ah follows the cons.

BÚGÍS

is supposed to be the most ancient of the languages spoken in the island of Celebes. The same Alphabet is used in the Macassar language.

ৗ a	ৗ ba	ৗ ra	ৗ la
ৗ ka	ৗ ma	ৗ cha	ৗ wa
ৗ kha	ৗ pha	ৗ ja	ৗ sa
ৗ ga	ৗ ta	ৗ a	ৗ ha
ৗ nga	ৗ da	ৗ chha	ৗ ya
ৗ pa	ৗ na	ৗ ra	

Every consonant has an inherent vowel, with which it forms a separate syllable.

The following vowels vary in position:

ৗ e before a letter.

ৗ i over a letter.

ৗ o after a letter.


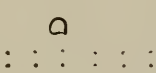

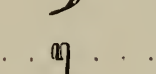
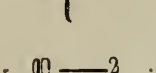

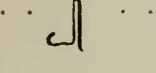
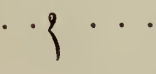


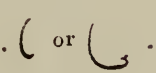
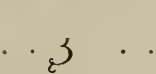
ৗ u under a letter.

ৗ ung at the top of a letter.

# JAVANESE


ORDINARY LETTERS			INITIAL LETTERS		
Ordin. Form	Pasangans	Sound	Ordin. Form	Pasangans	Sound
. 𑊀 . .	. . 𑊀 . .	. . hâ . .	. . 𑊀𑊀 . .	—	. . Nâ . .
. 𑊁 . .	. . 𑊁 . .	. . nâ . .	—	. . 𑊁 . .	. . Tyâ . .
. 𑊂 . .	. . 𑊂 . .	. . tyâ . .	. . 𑊂 . .	—	. . Kâ . .
. 𑊃 . .	. . 𑊃 . .	. . râ . .	. . 𑊃 . .	. . 𑊃 . .	. . Tâ . .
. 𑊄 . .	. . 𑊄 . .	. . kâ . .	𑊄 or 𑊄	—	. . Sâ . .
. 𑊅 . .	. . 𑊅 . .	. . dâ . .	. . 𑊅 . .	. . 𑊅 . .	. . Pâ . .
. 𑊆 . .	. . 𑊆 . .	. . tâ . .	. 𑊆 . .	—	. . Nyâ . .
. 𑊇 . .	. . 𑊇 . .	. . sâ . .	. . 𑊇 . .	—	. . Gâ . .
. 𑊈 . .	. . 𑊈 . .	. . wâ . .	. 𑊈 . .	—	. . Bâ . .
. 𑊉 . .	. . 𑊉 . .	. . lâ . .	UNCONNECTED VOWELS.		
. 𑊊 . .	. . 𑊊 . .	. . pâ . .	𑊊	𑊋	𑊌
. 𑊋 . .	. . 𑊋 . .	. . dâ . .	a	i	u
. 𑊌 . .	. . 𑊌 . .	. . dyâ . .	𑊍	𑊎	𑊏
. 𑊍 . .	. . 𑊍 . .	. . yâ . .	e	o	
. 𑊎 . .	. . 𑊎 . .	. . nyâ . .	ADDITIONAL CONSONANTS.		
. 𑊏 . .	. . 𑊏 . .	. . mâ . .	The following four letters, with the sign 𑊐 ( <i>Sastrosoro</i> ) at the top, occur in words derived from the Arabic, as there are no consonants in the Javanese Alphabet, which fully express these sounds.		
. 𑊐 . .	. . 𑊐 . .	. . gâ . .	𑊐 châ	stands for the Arabic	𑊑 châ
. 𑊑 . .	. . 𑊑 . .	. . bâ . .	𑊒 fâ	» » » »	𑊓 fe
. 𑊒 . .	. . 𑊒 . .	. . tâ . .	𑊔 zâ	» » » »	𑊕 ze
. 𑊓 . .	. . 𑊓 . .	. . ngâ . .	𑊖 ghâ	» » » »	𑊗 ghain
~~~~~	~~~~~	~~~~~	NUMERALS.		
. 𑊘 . .	. . 𑊘 . .	<i>Pâ-tyere', rě</i>	𑊘	𑊙	𑊚
. 𑊙 . .	—	<i>Ngâ-letet, lě</i>	𑊛	𑊜	𑊝
			1	2	3
			4	5	6
			7	8	9
			0		


VOWELS AND DIACRITICAL SIGNS,  
called *Sandangan*.


Form	Name	Sound and power
	Pépět	ě
	Ulu or Wulu	i
	Suku	u
	Taling	e
	Taling-Tarung	o
	Paten or Pánton	(deprives a consonant of its vowel)
	Ságnyan or Wígnyan	h (at the end of a syllable)
	Tyěty'a	ng (at the end of a syllable)
	Layar	r (at the end of a syllable)
	Tyåkrå	r (between a consonant and a succeeding letter)
	Kěrět	rě (after a consonant)
	Pínkal	y (after a consonant)


PODOS OR PADAS.


Under this designation the Javanese writing contains the following signs:


 *Podo tuhur*. With this sign superiors begin their letters to inferiors.


 *Podo madyo* is used at the commencement of letters by persons of equal rank.


 *Podo andap*, with this superscription an inferior addresses a superior.


 *Podo-bab* stands at the beginning of a new paragraph.


 *Podo-lingso*, the usual stop at the end of a sentence or a detached word. In poetry it marks the end of verses, which are written consecutively like prose. It is doubled at the end of a section.

 *Podo andegging lyelatu* or *dirgo muraras* occasionally replaces the *Podo-lingso*; mostly it accompanies numerals, and isolates them from the adjoining words.

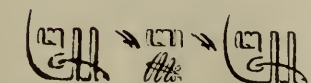
 *Ulu munta*. When the vowel of a final syllable is an *ulu*, this character takes a *Tyety'a* in the centre.

 *Suku mendut*. When the vowel of the last syllable is a *Suku* it takes this form.

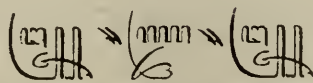
 *Dirgo mure* is the name of the sign placed over the *Taling* or *Taling-Tarung*, when this vowel occurs in the final syllable.

 *Podo watyan anglegenno*. Under this name the *Tarung* is employed as a sign of separation.

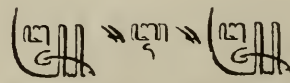
 *Piselep ingstembarg gede*, serves to divide poetry.



*Purwo-podo* stands at the beginning of poems.



*Madyo-podo*, at the beginning of a song following another, when the melody and the measure are changed.



*Wasono-podo* at the end of a poem.



TIBETAN

Form	Value	Form	Value
ཀ	k	མ	m
ཁ	kh	ཅ	ts
ག	g	ཆ	tsh
ང	ng	ས	s
ཅ	ch	ཐ	w
ཆ	chh	ཏ	j(French)
ག	j	ཙ	z
ཉ	nya	འ	ha
ར	t	ཡ	y
འ	th	ར	r
ར	d	ལ	l
ན	n	ཤ	sh
བ	p	ས	s
པ	ph	ཧ	h
བ	b	ཨ	a

VOWELS.

The Tibetan language is read from left to right and has five vowels. The vowel **a** is inherent in the several consonants. When confusion is apprehended from the absence of a distinct **a** after the prefixes

ག ཏ ཐ མ

the sign འ is inserted to denote **a**. The remaining vowels are written and named as follows,

ཀ gigu i  
ཁ zhabs-kyu u  
ག drengbu e  
ང naro o

The *gigu drengbu* and *naro* are placed above their consonants, the *zhabs-kyu* below them. When double, the *zhabs-kyu* is pronounced **uu** or **ow**; double *drengbu* **ay** or **ie**; double *naro* **oo** or **ou**. *Gigu* is often formed thus ཐ

འ is placed below the letters. **Ph** is changed by it into **f**; **ss** into **x**. Under the other letters it represents the vowel **a**; according to others it denotes **u**.

o placed over **th**, **a** and **h** denotes with the first of these letters **mce** with the other two **m**. According to others it signifies **ang** and **ong**.

ACCENTS.

ཀ guttural sign  
ཁ palatal »  
ག nasal »  
ང sign of the singular number.

PUNCTUATION.

འ is an introductory sign. Besides this figure other varieties are in use.  
ཀ Comma. Two such signs are equal to a full stop. Four such strokes, with ཐ between them, denote "the end".  
ཀ is inserted between the syllables.  
o mark the stress of a word.

LIGATURES.

འཀ འཁ འག འང འཅ འཆ འས འཐ འཏ འཙ འའ འཡ འར འལ འཤ འས འཧ འཨ

MANTSHU

Name	Form				Value	Name	Form				Value
	unconnected	initial	medial	final			unconnected	initial	medial	final	
A	ᠠ	ᠠ	ᠠ	ᠠ	a	Sha	ᠰ	ᠰ	ᠰ	ᠰ	sh
E	ᠡ	ᠡ	ᠡ	ᠡ	e	Ta	ᠲ	ᠲ	ᠲ	ᠲ	t
I	ᠢ	ᠢ	ᠢ	ᠢ	i	Da	ᠳ	ᠳ	ᠳ	ᠳ	d
O	ᠣ	ᠣ	ᠣ	ᠣ	o	Te	ᠲ	ᠲ	ᠲ	ᠲ	t
U	ᠤ	ᠤ	ᠤ	ᠤ	u	De	ᠳ	ᠳ	ᠳ	ᠳ	d
᠋O	ᠥ	ᠥ	ᠥ	ᠥ	ō	La	ᠯ	ᠯ	ᠯ	ᠯ	l
An	ᠠᠨ	ᠠ	ᠠ	ᠠ	an	Ma	ᠮ	ᠮ	ᠮ	ᠮ	m
Na	ᠨ	ᠨ	ᠨ	ᠨ	n	Cha	ᠴ	ᠴ	ᠴ	ᠴ	ch
Ka	ᠬ	ᠬ	ᠬ	ᠬ	k	Ja	ᠵ	ᠵ	ᠵ	ᠵ	j
Ga	ᠭ	ᠭ	ᠭ	ᠭ	g aspirated	Ya	ᠶ	ᠶ	ᠶ	ᠶ	y
Kha	ᠬᠠ	ᠬ	ᠬ	ᠬ	kh guttural	Ke	ᠬ	ᠬ	ᠬ	ᠬ	k
Ba	ᠪ	ᠪ	ᠪ	ᠪ	b soft	Ge	ᠭ	ᠭ	ᠭ	ᠭ	g
Pa	ᠫ	ᠫ	ᠫ	ᠫ	p aspirated	Khe	ᠬ	ᠬ	ᠬ	ᠬ	kh guttural
Za	ᠵ	ᠵ	ᠵ	ᠵ	z	Ra	ᠷ	ᠷ	ᠷ	ᠷ	r

MANTSHU

Name	Form				Value
	unconnected	initial	medial	final	
Fa					f
Wa					w
Dze					dz
Tze					tz
Zha					j (French)
Se					s
Chha					chh
Jha					jh

LIGATURES					Value
unconnected	initial	medial	final	Value	
					bi
					bo
					bu
					bo long
					pi
					po
					pu
					po long
					ki
					ku
					me

DIPHTHONGS.				

CONSONANTS BEFORE CONSONANTS.				

a	sere	khergen

ACCENTS.

˘ softens the sound.

◌ changes the letters into gutturals.

PUNCTUATION.

˙ equal to semi-colon.

˚ equal to full stop.

THE NUMERALS are composed of letters, as

1 40 400

The Mantshu characters are written from the top downwards. The lines are read from left to right, as

MONGOLIAN

CONSONANTS				VOWELS			
Initial	Medial	Final	Value	Initial	Medial	Final	Value
ᠨ	ᠨ	ᠨ	n	ᠠ	ᠠ	ᠠ	a
ᠪ	ᠪ	ᠪ	b	ᠡ	ᠡ	ᠡ	e
ᠳ	ᠳ	ᠳ	ch Scotch	ᠢ	ᠢ	ᠢ	i
ᠬ	ᠬ	ᠬ	gh guttural	ᠣ	ᠣ	ᠣ	o
ᠬ	ᠬ	ᠬ	k	ᠤ	ᠤ	ᠤ	u
ᠬ	ᠬ	ᠬ	g	ᠥ	ᠥ	ᠥ	ö
ᠮ	ᠮ	ᠮ	m	ᠦ	ᠦ	ᠦ	ü
ᠯ	ᠯ	ᠯ	l				
ᠷ	ᠷ	ᠷ	r				
ᠲ	ᠲ	ᠲ	t				
ᠳ	ᠳ	ᠳ	d				
ᠶ	ᠶ	ᠶ	y				
ᠵ	ᠵ	ᠵ	z, dz				
ᠴ	ᠴ	ᠴ	ts or ch				
ᠰ	ᠰ	ᠰ	s				
ᠱ	ᠱ	ᠱ	sh				
ᠰ	ᠰ	ᠰ	w				

effect exercised upon them by certain orthographical rules. — The consonants are not regarded as isolated sounds, but are always joined to vowels with which they form simple syllables. An exception is made to this rule when a consonant occurs as the final of a syllable or a word. But even such final consonants may be attended by a vowel. A variation of the Mongolian characters is known under the name of *Galik*.

PUNCTUATION.

- ᠰ This sign divides sentences.
- ᠰ is used at the end of a period.

Mongolian books are not numbered by the page but by the folio. It is usual to head each folio by ᠰ or some other mark like this.

OBSERVATIONS.

Like the Mantshu the Mongolian characters are written in perpendicular lines from left to right. The Alphabet consists of seven vowels, together with diphthongs derived from them, and of seventeen consonants which vary in form according to their position at the beginning, the middle, and the end of a word; or according to the

ARMENIAN

Form	Name	Value	Num.- power	Form	Name	Value	Num.- power.
Ա ա	Jpe	a	1	Մ մ	mien	m	200
Բ բ	pien	p	2	Յ յ	he or ye	h or y (in toy)	300
Գ գ	kim	k ck	3	Ն ն	noo	n	400
Դ դ	tah	t (soft)	4	Շ շ	shah	sh	500
Ե ե	yetch	y (cons.)	5	Ո ո	wo	WO(in word) orO(in move)	600
Զ չ	zah	z	6	Չ չ	tchah	tch	700
Է է	è -	e (in met)	7	Պ պ	bé	b	800
Ը լ	yet	e (in paper)	8	Ջ ճ	tché	ch (soft)	900
Թ թ	twoh	t (hard)	9	Ռ ռ	rah	r (hard)	1000
Ժ ժ	zhe	j (French)	10	Ս ս	sé	s	2000
Ի ի	inni	i (in ill)	20	Վ վ	viev	v	3000
Լ լ	lune	l	30	Տ տ	dune	d	4000
Խ խ	khe	ch(German)	40	Ր ը	ré	r (soft)	5000
Ջ ճ	dzah	z (Italian)	50	Ց զ	tzvoh	tz (hard)	6000
Կ կ	ghien	g (hard)	60	Դ լ	une	u (in due)	7000
Ն ն	kwoh	h	70	Փ փ	pure	p	8000
Չ չ	tzah	tz (soft)	80	Ք զ	ké	k	9000
Ղ ղ	ghahd	γ(Romaic)	90	Օ օ	o	o	10000
Ճ ճ	jé	j	100	Ֆ ֆ	pha	f	20000

LIGATURES.

հն	լս	մե	մի	մմ
յև	լւ	մց	մյե	վն

ACCENTS AND PUNCTUATIONS.

' acute	' apostrophe	— sign of length
` grave	, comma	° sign of brevity and abbrevi- ation
ˆ circumflex	: colon or semicolon	⌞ sign of abbreviation, it also con- verts a letter into a numeral.
˘ rough breathing	. full stop	
˙ soft breathing	- hyphen	

# GEORGIAN.

The Georgian language is written in two Alphabets. The ancient character, used in the Bible and ecclesiastical works, is called *Khūtsūri* (i. e. sacerdotal). The character *Mkhedrūli* (or rather *Mkhedrūli khēli* i. e. Soldier's hand) is used in ordinary writing and printing.

KHŪTSŪRI				MKHEDRŪLI					
Form	Value	Form	Value	Form	Name	Value	Form	Name	Value
ჲ	a	ბ	s	ა	an	a	უ	un	oo
ჳ	b	ტ	t	ბ	ban	b	ჳ		w
ჴ	g	ო	oo	გ	gan	g	ჴ	vě	vě
დ	d	ჲ	v	დ	don	d	ფ	phar	ph
ე	e	ჲ	p'h	ე	en	e	ქ	khan	kh
ჲ	w	ჲ	k	ვ	win	v	ღ	ghan	gh (ع Arab.)
ზ	z	ღ	gh (Arab.)	ზ	zen	z	ყ	qar	q (ق Arab.)
ჲ	h, ě (short)	ყ	q	ჲ	he	e	შ	shin	sh
თ	th	შ	sh	თ	than	th	ჩ	chin	ch
ი	i	ჩ	ch	ი	in	i	ც	tzan	tz
კ	k'	ც	ts	კ	kan	k	ძ	dzil	dz
ლ	l	ძ	ds	ლ	las	l	წ	thzil	thz
მ	m	წ	thz	მ	man	m	ჯ	jar	j
ნ	n	ქ	kh	ნ	nar	n	ხ	khan	kh (rough)
ი (short)	i (short)	ჲ	khh	ი (short)	ie	i (short)	ჲ	khbar	khh (very rough)
ო	o	ჲ	j	ო	on	o	ჯ	jan	j
პ	p	ჲ	h (mute)	პ	par	p	ჲ	hae	h
ჲ	j (French)	ჲ	ho	ჲ	zhan	j (French)	ჲ	hoe	hoi
რ	r	ჲ	ch	რ	rae	r	ფ	fa	f
		ჲ		ს	san	s	ჲ	short e	
		ჲ		ტ	tar	t			

## PUNCTUATION.

- Hyphen	:	Full stop
∴ End of a Period	.	Semicolon
	,	Comma.

GREEK

Form	Name	Value
A α	Alpha	a
B β	Beta	b
Γ γ	Gamma	g
Δ δ	Delta	d
E ε	Epsilon	e short
Z ζ	Zeta	z
H η	Eta	e long
Θ θ	Theta	th
I ι	Iota	i
K κ	Kappa	k
Λ λ	Lambda	l
M μ	My	m
N ν	Ny	n
Ξ ξ	Xi	x
O ο	Omikron	o short
Π π	Pi	p
P ρ	Rho	r
Σ σ ς	Sigma	s
T τ	Tau	t
Υ υ	Ypsilon	u
Φ φ	Phi	f ph
X χ	Chi	ch
Ψ ψ	Psi	ps
Ω ω	Omēga	o long

OBSERVATIONS.

- γ before γ and the other palatals (κ χ ξ) is pronounced like n, as ἐγγύς (eng-gus).
- ι is a mere vowel and never represents the consonantal sound of y, as Ἰωνία (I-onia). In foreign words the deficient consonant was replaced by ι, as Ιούλιος (Julius).
- σ is an initial and medial s. The final is marked by the sign of ς. The latter is, in some modern editions, used at the end of medial syllables.
- τ before ι, followed by a vowel, retains its proper sound of ti, and is not pronounced like shi, as Γαλατία (Ga-la-ti-a).

Accents and Punctuation

SPIRITS OR BREATHINGS.

Every Greek word, commencing with a vowel, has over this initial either  
(<sup>ˊ</sup>) spiritus lenis, the soft breathing,  
or (<sup>ˋ</sup>) spiritus asper, the rough breathing.  
The former is aspirated before a vowel and equal to our h. The spiritus lenis is placed over an unaspirated initial vowel.  
When a word commences with a diphthong (αι, ει, οι, υι, αυ, ευ, ηυ, ου, ωυ), the breathings as well as the accents are placed over the second vowel, as αὐτός, οἶος, εἰκὼν. ρ always has the rough breathing at the beginning of a word. In the middle of a word, when this letter is doubled, the first ρ has the soft and the second the rough breathing, as ῥῥ.

ACCENTS.

- ˊ acute or sharp sound.
- ˋ grave or heavy sound.
- ˘ circumflex or long and trailing sound.

Accents, combined with either of the breathings or with the diæresis, are marked in the following manner,  
" " " " " " " "

PUNCTUATION AND OTHER MARKS.

The point and comma are used in Greek as in English. There is no semicolon. The Colon is denoted by a dot over the line (˙). The note of interrogation is (;). In some modern editions the note of exclamation (!) has been introduced.  
The Comma is also used to distinguish two words of equal spelling. As ὄ,τι, τό,τε, differing from the particles ὅτι, τότε. This sign is termed Diastole or Hyper-diastole.  
The following signs are used in connexion with letters and syllables. The Apostrophe (ˊ), the Diæresis (˝), over a vowel separated from the sound of a preceding vowel, and the Coronis ˊ in contracted words to denote a Crasis as τούναντίον for τὸ ἐναντίον.  
Iota subscriptum is the Iota under the vowels α, η, ω, and indicates the etymology of the words. Formerly this ι was pronounced, and had its place by the side of the vowel. This lateral Iota is still used in words spelled with capital letters, as ΘΙ ΣΟΦΙΑ (for τῆ σοφια) Ἀιδης (ἄδης).

NUMERALS.

The Greeks employed the letters of the alphabet to denote the numerals, but as these characters were not sufficient for this purpose, the ς (Βαυ, Vau) or Ϝ (Digamma) was inserted after the ε, the Ϟ (Κόππα) after π, and Ϟ (Σαμπι) after ω. The letters employed as numerals are distinguished by a top line sloping, to the right as α' 1, β' 2, γ' 6, δ' 10, ε' 11, ς' 20, ζ' 26, Ϟ' 100, σ' 200, σλβ' 232 etc. The thousands recommence with α, and have a stroke below on the left, as α 1000, βσλβ' 2232.

## GREEK LIGATURES AND ABBREVIATIONS.

These contractions are peculiar to old editions of Greek works. They are no longer used in modern typography.

αι	αι	ειναι	ου	στι
αν	αν	εξ	ουδε	στο
αλ	αλ	ελ	ουκ	στρο
αλλ	αλλ	ελλ	ουτου	στυ
αν	αν	ελατιον	π	στω
απο	απο	εν	παρα	συ
αρο	αρο	εξ	πει	σω
ας	ας	επειδη	περ	τ
αυ	αυ	επευ	περι	τα
αυτω	αυτου	επι	πην	ται
αυτω	αυτω	επι	ππ	ταις
β	β	εστι	πρ	ταυτα
γ	γα	ευ	προ	τει
γα	γα	ην	πτ	την
γδ	γδ	θ	πυ	την
γγ	γγ	θα	πω	της
γγ	γγ	θε	ρα	τι
γε	γε	θει	ρι	το
γει	γει	θη	ρο	το
γελ	γελ	θι	σ	το
γελλ	γελλ	θo	σα	τον
γεν	γεν	θυ	σαυτα	του
γερ	γερ	θω	σε	του
γη	γη	και	σει	του
γι	γι	και	ση	τρο
γινεται	γινεται	και	σην	ττ
γν	γν	κατα	σθ	τυ
γο	γο	κατα	σθαι	τω
γο	γο	κεφαλαιον	σχ	τω
γρ	γρ	λλ	σι	των
γυ	γυ	ματων	σκ	των
γω	γω	μεν	σο	υ
δ	δ	μεν	σο	υι
δε	δε	μενος	σπ	υν
δευ	δευ	μετα	σπαν	υπ
δεξ	δεξ	μετα	σσ	υπο
δια	δια	μετα	στ	χαν
δια	δια	μων	στα	χι
δρ	δρ	οιον	στε	χο
ει	ει	ος	σται	ψι
ει	ει		στη	

# ROMAIC OR MODERN GREEK.

The Alphabet consists of the following 24 letters, which are the same as in ancient Greek.

A α, B β, Γ γ, Δ δ, E ε, Z ζ, H η, Θ θ, I ι, K κ, Λ λ, M μ, N ν, Ξ ξ, O ο, Π π, P ρ, Σ σ (final ς), T τ, Y υ, Φ φ, X χ, Ψ ψ, Ω ω.

The vowels are α, ε, η, ι, ο, υ and ω.

## PRONUNCIATION.

- A α (*Alpha*) short or long as in *papa*.  
 B β (*Vita*) is represented by *bh* or *v*. In sound it differs slightly from the English *v*, the mouth being somewhat rounded in the articulation of the Romaic letter.  
 Γ γ (*Gamma*) is an aspirate of *g* in *go*. In γγ the first gamma becomes nasal; αγγελος, for instance, is pronounced *ang-ye-tos*. It receives the same sound before the palatals ξ and χ, as αναγκη (*a-nang-ki*). Before ε ι and υ it is like *y* in *yes*. To produce the sound of our *g* in *grey*, the Modern Greeks use λ'x as λ'xρεϊχαμ (*Graham*).  
 Δ δ (*Delta*) is aspirated as *th* in *the*.  
 E ε (*Epsilon*) as the *e* in *pet*.  
 Z ζ (*Zita*) like *z*. Ζωή (*zo-i*).  
 Θ θ (*Thita*) like *th* in *thick*.  
 Ι ι (*Iota*) like *i* in *machine*. When ι is placed under the vowels as in α η φ or by the side of capital vowels (Αι, Ηι, Ωι) it is not sounded and only lengthens the principal vowel. This ι is known as the *Iota subscriptum*.  
 Κ κ (*Kappa*) like our *k*. It is softened after the nasal γ hence ἀγγλία is pronounced *angliá*.  
 Λ λ (*Lameda*) like *l* in *long*. Before ι it has the sound of *li* in *William*.  
 Μ μ (*Mi*) like *m*. Placed before π, these two letters acquire the sound of *b* μπαροῦτι (*barooti*). This combination of μπ takes the sound of *b* in words received from foreign languages, but in compound Romaic words, each letter retains its original pronunciation. Example εμπερευμα (*em-pee-rec-ma*).  
 Ν ν (*Ni*) is *n*. Placed before τ, the two letters coalesce in the sound of *d*, which is articulated somewhat harder than the δ. For example διβανι (*diwani*). ντζ have conjointly the sound of *j*; as ντζαμ (*jami*). When the letters ν and τ form part of two syllables in a compound word, they retain their natural sound of *nt*. For example εντιμος (*en-timos*). Before the vowel ι the ν is articulated like *ni* in *opinion* as νιπτω (*nyipto*).  
 Ξ ξ (*Xi*) is *X*.  
 Ο ο (*Omikron*) like *o* in *dot*.  
 Π π (*Pi*) like *p*.  
 Ρ ρ (*Ro*) like *r* in *rod*. If doubled, it has a sharper sound.  
 Σ σ (*Sigma*) like *s* in *so*. Before Β, Γ, Δ, Ζ, Α, Μ, Ν, Ρ and in the proclitics (such as τούς τάζ) before the same consonants, the Sigma is sounded like *z*, as Σμύρνη (*Zmirni*).  
 Τ τ (*Taph*) is *t*. τζ sounds sometimes like *ts*, but generally like *ch*, as τζελεπης (*chetepis*). Words with τζ are mostly of foreign origin.  
 Υ υ (*Ypsilon*) like *y* in *Egypt*. For example τρυβλιον (*trielion*).  
 Φ φ (*Phi*) like *f* or *ph*.  
 Χ χ (*Khi* or *Chi*) like the German or Scotch *ch*. Before the vowels α, ο, υ, it is more harsh than before ε and ι.  
 Ψ ψ (*Psi*) like *ps* in *gipsy*.  
 Ω ω (*Omega*) is the long *o*.

The following are diphthongs αι, αυ, ει, ευ, ηυ, ου and ου (8). Αι sounds like *e* in *ethics*. The υ

of αυ, ευ, ηυ sounds like β before a vowel, or the soft and liquid letters β, γ, δ, ζ, λ, μ, ν, ρ. — οι is like *ee* and ου like *oo* in *good*.

The diæresis over the second vowel of diphthongs restores to each vowel its original sound; αι, αυ, ει, ευ are pronounced separately α-ι, α-υ &c.

## BREATHINGS AND PUNCTUATION.

The Romaic or Modern Greek admits like the ancient language two marks over initial vowels, namely the *Smooth breathing* Spiritus lenis ('), which is not noticed in reading, and the *Rough breathing* Spiritus asper ('), which in classical Greek takes the sound of our *h*, but is not audible in the modern language. The ρ, as an initial, is invariably marked with the *rough breathing*. In double ρ the first has the *smooth* and the second the *rough breathing*.

The names of the stops are, τελευτα, full stop (.), μισοστιγμα colon (:), υποστιγμα ή υποδιαστολη comma (,) and σημεϊον ερωτησεως sign of interrogation (?). The mark of exclamation (!) is rarely used.

To these signs must be added the *apostrophe* and the *diæresis*. The former (') denotes the elision of one or more vowels. E. g. απ' εμένα, απ' ημάς instead of απο etc. This elision of vowels occurs even before consonants as 'απ' το instead of από το.

In αν (instead of και αν) and ανέναντι (instead of και αν εναντι) etc, the mark (') denotes the coalescence of vowels (κράσις) and is called *coronis*. This mark is often used in contractions as μουκουσαν το χέρι.

The diæresis prevents the union of diphthongs. E. g. μοιαντζής sounds *mo-y-an-jis*.

Another mark of separation is the *diastole* (,), which resembles the comma, and is used to distinguish the pronoun ε, τι and the adverb τό, τε from the conjunction ετι and the adverb τότε.

## ACCENTS.

The tone is indicated by three accents, namely the *circumflex* (περισπωμένη) ~ or long accent, the *acute* (όγεια) or sharp accent, and the *grave* (βαρεϊα) or heavy accent in final syllables. Some monosyllabic words, being unaccented, are called *atona*. The *circumflex* can only be placed on the ultimate and penultimate syllable. When the vowel of a final syllable is long, the penultimate vowel cannot take the circumflex. A word is termed *perispomenon*, when it has the circumflex on its last syllable, or if it is a monosyllable and is marked with this accent. When the circumflex occurs over the penult, the word is *properispomenon*.

The *Acute* takes its place in the penultimate and ante-penultimate syllable. Also on the final syllable at the end of a period, or when an enclitic follows (i, e, a word like μου, μοι, μέ which throws its accent on the antecedent).

When the final syllable is long, the acute cannot revert to the ante-penultimate.

When the acute occurs in a monosyllable or in a final syllable, the word is called *oxytonon*; the penultimate, thus accented, is called *paroxytonon*; and the ante-penultimate with the acute is *proparoxytonon*.

## OLD-SLAVONIC (CYRILLIC).

Based on the most ancient MSS, and cut under the direction of the I. R. Anlic Councillor  
Dr. PAUL JOS. SCHAFARIK at the type-factory of GOTTLIEB HAASE SÖHNE in Prague.

Form	Name	Value	Form	Name	Value
А а	Az	a	Ф ф	Fert	f, ph
Б б	Buky	b	Х х	Chěr	kh
В в	Vědi	v	Ѡ ѡ	Ó	ó
Г г	Glagol'	g	Ѣ ѣ	Ot	ot
Д д	Dobro	d	Ц ц	Ci	ts
Е е	Est'	e	У у	Červ'	č
Ж ж	Živěte	ž	Ш ш	Ša	š
З з	Zělo	z	Щ щ	Šta	št, šč
И и	Iže	i	Ъ ъ	Jer	—
І і	I	i, y	Ы ы	Jery	y
К к	Kako	k	Ь ь	Jery	y
Л л	Ljudi	l	Б б	Jerek	—
М м	Myslite	m	Ѣ ѣ	Jeti	ě
Н н	Naš	n	Ю ю	Ju	yu
О о	On	o	Ѡ ѡ	Ja	ya
П п	Pokoj	p	Ѣ ѣ	Je	ye
Р р	Rci (Reci)	r	Ѡ ѡ	Ės	ė
С с	Slovo	s	Ѣ ѣ	As	a
Т т	Tverdo	t	Ѡ ѡ	Jes	yė
Ѣ ѣ	Těrv'	t	Ѡ ѡ	Jas	ya
Ѡ ѡ	Uk	u	Ѣ ѣ	Ksi	x
Ѣ ѣ	Uk	u	Ѣ ѣ	Psi	ps
			Ѡ ѡ	Thita	th
			Ѣ ѣ	Ižica	y

NUMERICAL LETTERS.

**А · В · Г · Д · Е** etc.    **И · Й · К · Л · М · Н** etc.    **О · П · Р · С · Т · У · Ф · Х · Ц · Ч · Ш · Щ · Ъ · Ы · Ь · Э · Ю · Я** etc.  
 1    2    3    4    5                      11    12    13    14    15                      21    22    23    24    25  
**z = s = 6**                      **ç = γ = 90**                      **z = 1000, E. g. ⚡⚡⚡⚡ = 6396.**

ABBREVIATIONS (IN SLAVONIC TITLY).

- Titla (simple).	ᳵ Glagol'-Titla.	ᳶ Oneček.
ᳵ Dobro - Titla.	ᳶ Slovo - Titla.	᳷ Pajerek.

## NOTES.

1) The power and pronunciation of the accented (Roman) characters are sufficiently explained in the Polish and Czechian Alphabets.

2) The alphabetical names have been rectified and, as regards the nasals, completed according to approved ancient authorities.

3) The characters are designed to be printed without the abbreviations, which as relics of the

middle ages must be restricted to ecclesiastical works. Here they are solely introduced as historical forms. The "Pajerek" is a *Jer* or *Jerek* placed over a letter.

4) As in ancient MSS, the numbers are indicated by the insertion of the letters between two dots. The "Titla" formerly used have thus become unnecessary.

## GLAGOLITIC.

According to ancient MSS (sec. XI—XII) designed by Dr. PAUL JOS. SCHAFARIK, cut at the type-factory of GOTTLIEB HAASE SÖHNE in Prague.

Form	Name	Value		Num: value	Form	Name	Value		Num: value
		Cyrill.	Latin				Cyrill.	Latin	
Ⲑ Ⲑ	Az	Ⲁ	a	1	Ⲕ Ⲕ	Uk	ⲱ	u	400
Ⲓ Ⲓ	Buky	Ⲃ	b	2	Ⲕ Ⲕ	Fert	Ⲕ	f, ph	500
Ⲕ Ⲕ	Vědi	Ⲅ	v	3	Ⲕ Ⲕ		Ⲕ		
Ⲗ Ⲗ	Glagol'	Ⲇ	g	4	Ⲕ Ⲕ	Chër	Ⲉ	ch	600
Ⲙ Ⲙ	Dobro	Ⲑ	d	5	Ⲕ Ⲕ	Ó	Ⲑ	ó	700
Ⲛ Ⲛ	Est'	Ⲓ	e	6	Ⲕ Ⲕ	Šta	Ⲕ	št	800
Ⲝ Ⲝ	Živěte	Ⲕ	ž	7	Ⲕ Ⲕ	Ci	Ⲕ	c	900
Ⲟ Ⲟ	Zělo	Ⲗ	z	8	Ⲕ Ⲕ	Červ'	Ⲕ	č	1000
Ⲡ Ⲡ	Zemlja	Ⲙ	z	9	Ⲕ Ⲕ	Ša	Ⲕ	š	
Ⲣ Ⲣ	Iže	Ⲛ	i	10	Ⲕ Ⲕ	Jer	Ⲕ	o e	
Ⲥ Ⲥ	I	Ⲝ	i	20	Ⲕ Ⲕ	Jery	Ⲕ	y	
Ⲧ Ⲧ	Děrv' o. Jot	Ⲟ, Ⲡ	dj, j	30	Ⲕ Ⲕ	Jerek	Ⲕ	e i	
Ⲩ Ⲩ					Ⲕ Ⲕ		Ⲕ		
Ⲫ Ⲫ	Kako	Ⲡ	k	40	Ⲕ Ⲕ	Jeť	Ⲕ	ě, ja	
Ⲭ Ⲭ	Ljudi	Ⲣ	l	50	Ⲕ Ⲕ	Ju	Ⲕ	ju	
Ⲯ Ⲯ	Myslite	Ⲭ	m	60	Ⲕ Ⲕ	Eš	Ⲕ	e	
Ⲱ Ⲱ					Ⲕ Ⲕ	As	Ⲕ	a	
Ⲳ Ⲳ	Naš	Ⲱ	n	70	Ⲕ Ⲕ	Ješ	Ⲕ	jē	
Ⲵ Ⲵ	On	Ⲳ	o	80	Ⲕ Ⲕ	Jaš	Ⲕ	ja	
Ⲷ Ⲷ	Pokoj	Ⲵ	p	90	Ⲕ Ⲕ	Thita	Ⲕ	th	
Ⲹ Ⲹ	R'ci	Ⲷ	r	100	Ⲕ Ⲕ	Ižica	Ⲕ	y	
Ⲻ Ⲻ	Slovo	Ⲹ	s	200					
Ⲽ Ⲽ	Tvr'do	Ⲻ	t	300					

## NOTES.

1. The letter *Jery* is a compound of *Jer* and *Iže*.
2. The letters Ⲕ—Ⲭ and Ⲕ—Ⲡ are duplicate forms. Ⲕ and Ⲕ are peculiar to Bulgarian MSS; Ⲭ and Ⲡ are Croatian characters. Ⲕ on the other hand is not a real duplicate form of Ⲕ, it being identical with Ⲕ, which is used *instead* of Ⲕ.
3. These characters are arranged to be printed without abbreviations, which are confined to liturgical books.
4. The numerical power of the letters is indicated by dots on both sides, as Ⲑ. Ⲑ. etc.
5. Further information on the value and the pronunciation of the accented letters is given in the Czechian and Polish Alphabets.

CROATO-GLAGOLITIC.

Designed from Croatian MSS and printed works by Dr. PAUL JOS. SCHAFARIK; cut at the type-  
factory of GOTTLIEB HAASE SÖHNE in Prague.

Form	Name	Value	Num: value	Form	Name	Value	Num: value
Ⱶ ⱶ	Az	a	1	Ɀ Ɀ	Uk	u	400
ⱷ ⱸ	Buky	b	2	ⱽ ⱽ	Fert	f, ph	500
ⱹ ⱺ	Vědi	v	3	ⱻ ⱻ	Chěr	kh (ch)	600
ⱼ ⱽ	Glagol'	g	4	Ȿ Ȿ	Ó	ó	700
Ɀ Ɀ	Dobro	d	5	Ɀ Ɀ	Šta	št	800
ⱽ ⱽ	Est'	e	6	Ɀ Ɀ	Ci	ts	900
Ɀ Ɀ	Živěte	ž	7	Ɀ Ɀ	Červ'	č	1000
Ɀ Ɀ	Zělo	z	8	Ɀ Ɀ	Ša	š	
Ɀ Ɀ	Zemlja	z	9	Ɀ Ɀ	Jer	o e	
Ɀ Ɀ	Iže	i	10	Ɀ Ɀ			
Ɀ Ɀ	I	i	20	Ɀ Ɀ	Jery	y	
Ɀ Ɀ	{ Děrv' č. Jot }	dy, y	30	Ɀ Ɀ			
				Ɀ Ɀ	Jerek	e i	
Ɀ Ɀ	Kako	k	40	Ɀ Ɀ			
Ɀ Ɀ	Ljudi	l	50	Ɀ Ɀ	Jet'	ě, ya	
Ɀ Ɀ	Myslite	m	60	Ɀ Ɀ	Ju	yu	
Ɀ Ɀ	Naš	n	70	Ɀ Ɀ	Ěs	ę	
Ɀ Ɀ	On	o	80	Ɀ Ɀ	As	a	
Ɀ Ɀ	Pokoj	p	90	Ɀ Ɀ	Jes	yę	
Ɀ Ɀ	R'ci	r	100	Ɀ Ɀ	Jas	ya	
Ɀ Ɀ	Slovo	s	200	Ɀ Ɀ	Thita	th	
Ɀ Ɀ	Tvr'do	t	300	Ɀ Ɀ	Ižica	y	

NOTES.

1. These characters are designed to be printed without the abbreviations, peculiar to liturgical works.
2. The numerical letters are distinguished by dots on both sides, as .Ⱶ. .ⱷ. etc.
3. The punctuation is the same as in other languages.
4. The letters Ɀ, Ɀ, Ɀ and Ɀ, the forms Ɀ and Ɀ, together with the combinations ⱿⱿ and ⱿⱿ, are only found in Bulgarian MSS. The ligature Ɀ instead of ⱿⱿ only occurs in Croatian MSS.
5. The value and pronunciation of the accented Roman characters may be ascertained by referring to the Czechian and Polish Alphabets.

## RUSSIAN

Form		Name	Value	Observations
Straight	Italic			
А а	<i>А а</i>	As	a	<p>The Russian Alphabet consists of 35 letters. Ecclesiastical and Old-Russian works, being written in the ancient Slavonic character, contain the following additional letters, <i>ѣ</i> (<i>Selo</i>) <i>s</i>, <i>Ѹ</i> or <i>ѹ</i> (<i>Ik</i>) <i>u</i>, <i>Ѡ</i> (<i>Ot</i>) <i>o</i>, <i>ѡ</i> (<i>Yuss</i>) <i>ю</i>, <i>Ѣ</i> (<i>O</i>) <i>ô</i>, <i>Ѥ</i> (<i>Ksi</i>) <i>x</i>, <i>Ѧ</i> (<i>Psi</i>) <i>ps</i>.</p> <p>In ecclesiastical books these letters serve as numerals, and are arranged as in Greek. The sign <i>↵</i> is placed over numerical letters.</p> <p><i>a</i> has the sounds of <i>bar</i> and <i>bat</i>.  <i>Ѣ</i> like <i>b</i>. Before the strong consonants and as a final letter it sounds like <i>p</i>.  <i>в</i> 1) At the beginning of a syllable and before <i>л н р</i> like <i>v</i>. 2) As a final, and before a hard consonant, like <i>ff</i>.  <i>г</i> 1) As an initial and medial letter nearly like <i>g</i> in <i>give</i>, but with a hard Hibernian aspiration. 2) As a final, or before <i>sh</i>, like <i>k</i>. 3) In ecclesiastical pronunciation it is aspirated like <i>h</i>. In some words, especially foreign, it sounds like <i>ch</i> in the Scotch <i>loch</i>. 4) The adjectival and pronominal ending <i>ro</i> is commonly pronounced <i>vo</i>, and in inferior style it is even spelled so.  <i>д</i> as our <i>d</i>.  <i>е</i> 1) At the beginning of syllables like <i>yai</i>. 2) At the end of syllables like <i>e</i> in <i>met</i>, with a feeble <i>y</i> before it. After sibilants this <i>y</i> is not heard. 3) When accented it sounds like <i>yeo</i> in <i>yeoman</i>, and after <i>ж ч ш щ ц</i> like <i>o</i> in <i>go</i>. This rule is applied <i>a</i>) before a consonant followed by the vowels <i>a, o, y, ѡ, Ѣ</i>; <i>b</i>) at the end of a word; <i>c</i>) in the instrumental case <i>ею</i> or <i>ей</i> of nouns fem. sing; <i>d</i>) before <i>г, к, х</i>, and the sibilants <i>ж, ш</i>. <i>e</i>) in the present tense. In improved spelling the sound of <i>yo</i> or <i>o</i> is indicated by <i>ë</i>. This <i>ë</i> also denotes the French sound of <i>eu</i>.  <i>ж</i> like <i>j</i> in the French word <i>jour</i>.  <i>и</i> and <i>i</i> sound alike.</p>
Б б	<i>Б б</i>	Buki	b	
В в	<i>В в</i>	Vyedi	v ff	
Г г	<i>Г г</i>	Glagol	g gh	
Д д	<i>Д д</i>	Dobro	d	
Е е	<i>Е е</i>	Yest	é yé yo o	
Ж ж	<i>Ж ж</i>	Zhivete	zh sh	
З з	<i>З з</i>	Zemla	z	
И й и й	<i>И й и й</i>	Izhe	i	
І і і	<i>І і і</i>	I	i	
К к	<i>К к</i>	Kako	k ck	
Л л	<i>Л л</i>	Lüdi	l	
М м	<i>М м</i>	Muislete	m	
Н н	<i>Н н</i>	Nash	n	
О о	<i>О о</i>	On	o a	
П п	<i>П п</i>	Pokoi	p	
Р р	<i>Р р</i>	Rtsui	r	
С с	<i>С с</i>	Slovo	s	
Т т т	<i>Т т т</i>	Tverdo	t	
У у	<i>У у</i>	U	u	
Ф ф	<i>Ф ф</i>	Fert	ph f	
Х х	<i>Х х</i>	Kherr	kh (ch in Ger.)	
Ц ц	<i>Ц ц</i>	Tsui	ts	
Ч ч	<i>Ч ч</i>	Tsherv	ch	
Ш ш	<i>Ш ш</i>	Sha	sh	
Щ щ	<i>Щ щ</i>	Shtsha	shch	
Ъ ъ	<i>Ъ ъ</i>	Yerr	hard suffix	
Ы ы	<i>Ы ы</i>	Yerui	ui i thick	
Ь ь	<i>Ь ь</i>	Yer	soft suffix	
Ѣ Ѣ	<i>Ѣ Ѣ</i>	Yat	yé éyo	
Э э	<i>Э э</i>	E	è	
Ю ю	<i>Ю ю</i>	Yu	yoo Fr.	
Я я	<i>Я я</i>	Ya	ya yè	
Ѧ Ѧ	<i>Ѧ Ѧ</i>	Fita	f	
Ѩ Ѩ	<i>Ѩ Ѩ</i>	Izhitza	y v	

а е и і о у ы ъ э я ѿ.

SERVIAN.

(Modern form, cut by F. Rösca in Leipzig.)

This language is divided into the dialects of the Herzegovina, of Ressaia and Syrmia. The Servians use the Slavonic (Cyrillic), the Croats and Wends the Roman characters.

Cyrillic	Latin	Pronunciation
А а	A a	a
Б б	B b	b
В в	V v	v
Г г	G g	g
Д д	D d	d
Ђ ђ	Dj dj	dy, Hungarian gy
Е е	E e	e
Ж ж	Ž ž	j in French
З з	Z z	z
И и	I i	i
І і	I i	y
Ј ј	J j	y
К к	K k	k
Л л	L l	l
Љ љ	Lj lj	ly, Ital. gl, gli
М м	M m	m
Н н	N n	n
Њ њ	Nj nj	ñ Ital. and Fr. ng
О о	O o	o
П п	P p	p
Р р	R r	r
С с	S s	s
Т т	T t	t
Ђ ђ	Ć ć	ty, tj
У у	U u	u
Ф ф	F f	f
Х х	H h	h
Ц ц	C c	ts
Ч ч	Č č	ch
Ш ш	Š š	sh
Щ щ	Šć šć	shch
Ъ ъ	—	hardening suffix
Ы ы	I i	ee, French u
Ь ь	—	softening suffix
Ѣ ѣ	Je je ě ie	yé, ié
Е е	Je je	yé
Ю ю	Ju ju	yū
Я я	Ja ja	yā
Џ џ	Dž dž	j
Ѧ ѧ	Th th	th

ILLYRIAN.

Nr. I represents the “organic” orthography now used in Roman-Catholic publications; Nrs. II and III are to some extent current in Slavonia, Croatia and Dalmatia.

I.	II.	III.	Pronunciation
a	a	a	The Vowels a, o, u, i, e sound as in German or Italian. ě as a medial, follows all the consonants except gutturals. It rarely is a final letter and never an initial. Its general sound is like ye (in yes). In the dialect of the Herzegovina it has the same pronunciation when not lengthened, otherwise it sounds like ee combined with ye, as is heard in see yet. Before i, like y in ye. In the Syrmian dialect it varies between ay and ee. In the Ressaia dialect it almost invariably sounds like ay (in nay). This ě is now often spelled ie. c is like ts in lots. ć and tj almost like ts. The difference between these spellings is, that ć can be used indiscriminately, and tj only in derived words. č like j in jar. dj and gj are nearly like j in jar. lj like lli in William. nj like ni in opinion. š like sh.
b	b	b	
c	c	cz	
ć	ch	ch	
č	cs	cs	
d	d	d	
dj	dj	dy	
e	e	e	
ě	e i	e i	
f	f	f	
g	g	g	
gj	gj	gy	
h	h	h	
i	i	i	
j	j	j	
k	k	k	
l	l	l	
lj	lj	ly	
m	m	m	
n	n	n	
nj	nj	ny	
o	o	o	
p	p	p	
r	r	r	
s	s	ss sz	
š	sh	sc	
t	t	t	
tj	ch	ty	
u	u	u	
v	v	v	
z	z	z	
ž	x	s	
dž	dx cx	ds	

ž like s in measure.  
dž like j in jar.  
r has the power both of a consonant and a vowel. As a consonant it sounds as in other languages. As a vowel it forms a separate syllable and is pronounced with a very slight sound of e. The orthography of this syllable varies. Some spell it ěr, the Ragusans àr. Others omit à and ě and simply write r, others again write ě.

Accents used in Servian: acute (´); sign of length (˘); ˘ or ˘ sign of brevity.

WALLACHIAN

Form	Name	Value		Modern Shape			Improved Modern Shape		
							Antiqua	Current	
Я а	As	a	Besides the Alphabet on the left there are two varieties of characters.  Ь (pronounced <i>Eer</i> ) is appended to a consonant at the end of a word without being sounded. In modern printing it is omitted.  Ы ( <i>Yory</i> ) is only employed in words of Slavonic origin.  Ѳ <i>Ishitza</i> , occurs in words derived from the Greek. After vowels its sound is <i>v</i> , after consonants <i>i</i> (as in <i>Bit</i> ).	А	a	à	А	a	a
Б б	Buke	b		Б	б	b	Б	б	b
В в	Vide	v		В	В	v	В	б	v
Г г	Glagol	g		Г	г	g	Г	г	g
Д д	Dobro	d		Д	д	d	Д	д	d
Е е	Yest	ye e long		Е	e	y	Е	e	yé e
Ж ж	Shivete	zh		Ж	ж	zh	Ж	ж	j (Fr.)
З з	Zalo	Nr. 6		З	з	z	З	з	z
И и	I	i		И	и	i	И	и	i
Й й	Ishe	y		Й	й	k	Й	й	k
К к	Kako	k	SHORT ACCENTS.  Ѧ is placed over an initial vowel and the diphthong ю.  Ѣ stands over a medial and final Ѧ and over a final ю.  —  LONG ACCENTS.  " over initial vowels and over ю.  ' over medial vowels.  over the medial Ѧ and the final а, Ѣ, Ѥ, Ѧ.  ~ over abbreviations and letters employed as numerals.	К	к	k	К	к	k
Л л	Liude	l		Л	л	l	Л	л	l
М м	Meslite	m		М	м	m	М	м	m
Н н	Nash	n		Н	н	n	Н	н	n
О о	On	o		О	о	o	О	о	o
П п	Pokoi	p		П	п	p	П	п	p
Р р	Rtse	r		Р	р	r	Р	р	r
С с	Slovo	s		С	с	s	С	с	s
Т т	Tverdo	t		Т	т	t	Т	т	t
У у	Uk	u		У	у	u	У	у	u
Ф ф	Fert	f ph	Ѧ and Ѣ are only used in foreign words.	Ф	ф	f	Ф	ф	f
Х х	Khир	kh h		Х	х	kh(ch)	Х	х	kh(ch)
Ц ц	O	o long		Ц	ц	ts	Ц	ц	ts
Ч ч	Tsi	ts		Ч	ч	ch	Ч	ч	ch
Ш ш	Sha	sh		Ш	ш	sb	Ш	ш	sb
Щ щ	Shta	sht		Щ	щ	sht	Щ	щ	sht
Ъ ѡ	Yor	e short		Ъ	ѡ	e	Ъ	ѡ	e
Ѣ ѣ	Yaty	éa		Ѣ	ѣ	éa	Ѣ	ѣ	éa
Ѥ ѥ	Yus	è (uüh)		Ѥ	ѥ	ya	Ѥ	ѥ	ya
Ѧ ѧ	Yu	yu		Ѧ	ѧ	(uüh)	Ѧ	ѧ	(uüh)
Ѩ ѩ	Yako	ya	Ѧ and Ѣ are only used in foreign words.	Ѩ	ѩ	ün	Ѩ	ѩ	ün
Ѭ ѭ	Ia	ya		Ѭ	ѭ	j	Ѭ	ѭ	j
Ѯ ѯ	Ftita	ft th		Ѯ	ѯ		Ѯ	ѯ	
Ѳ ѳ	Psi	ps		Ѳ	ѳ		Ѳ	ѳ	
Ѵ ѵ	Xi	x		Ѵ	ѵ		Ѵ	ѵ	
Ѷ ѷ	Ishitza	v i *		Ѷ	ѷ		Ѷ	ѷ	
ѹ Ѻ	Ůn	üing in Germ.		ѹ	Ѻ		ѹ	Ѻ	
Ѽ ѽ	Je	j		Ѽ	ѽ		Ѽ	ѽ	
ѿ				ѿ			ѿ		
ѿ				ѿ			ѿ		

APOSTROPHISED LETTERS.  
Ăă Ėė Ĭî Ĳĺ Œœ Šš Ţţ Țț ȺȻ

The Alphabet to the left is used in liturgical and ancient works. With the improved cultivation of the language the letters have been considerably simplified, as is shown in the two Alphabets at the right. No notice has been taken here of the ancient names and the accentuation of the letters.

## POLISH

a	like a
Ą ą	— ong
e	— e
é	— ié
Ę ę	— eng
i	— i
o	— o
Ó ó	— ou
u	— u
y	— e (ü)
b	— b
ó	— by'
c	— ts
Ć ć	— tssh
cz	— ch
d	— d
dz	— dz
dż	— dzy'
dź	— j
f	— f
g	— g
h	— h(ch)
ch	— kh
j	— y
k	— k
l	— l
Ł ł	— —
m	— m
ń	— my'
n	— n
Ń ń	— ny'
p	— p
ó	— p
r	— r
rz	— rsh
s	— s
Ś ś	— sy'
sz	— sh
t	— t
w	— v
ó	— vy'
z	— z
Ż ż	— zy'
Ż ż Ż ż	— j (Fr.)

The marginal column shows the pronunciation of Polish letters in as far as it approximates the English. The vowels *a, e, i, o, ou, u, ü* in the adjoining column are sounded as in German. The following peculiarities must be noticed.

In addition to the five elementary vowels, common to the European languages, occurs *y*, which is deeper than the *i* and sharper than the French mute *e* (in *poudre*, Polish *pułdyr*). As accessory vowels of *a, e* stand the nasals *ą* and *ę* (*ong, eng*). Before *b, p*, they sound *om*, but nasally; *é*, always strongly accented, is an intermediate of *e* and *i*. In *ie, ia, io, iu* the *i* merely indicates the softness of the preceding consonant; in fact this *i* forms part of such a consonant. *ó* is a strongly accented deep *o*, nearly like *u*. Hence the Polish vowels descend in the following gradation: *i, é, (ie), e, ę, y, a, ą, o, ó, u*.

These vowels have a clear and distinct sound, except the *i* which obtains the consonantal force of *y*, when it is followed by a vowel and preceded by *b, c, dz, m, n, p, s, w, z*. In this case the *i* is merely the medium of softening the consonant, Ex: *biodro* (loin) sounds *byodro*. Before *e* it becomes *ie*.

The consonants *ó, é, dż, m, n, p, s, w, z* are attended by a slight and rapid articulation of *y*, as if written *by, cy, dzy, my, ny, py, sy, wy, zy*. They stand as finals of words, and also of syllables followed by consonants. Of these letters *é* takes the intermediate sound of our *h* and *ch*.

*c* sounds like *ts* in *wants*.

*cz* is our *ch*, and *sz* our *sh*.

*dz* sounds like *ds* in *wands*.

*dż* is like *j* in *jar*.

*h* is of rare occurrence, the Slavonic *h* being represented in Polish by *g*. It is as guttural as the German *ch*, Ex: *hultaj* (a Good for nothing).

*ł* the virgulated *l* is heavier than the common *l*. The middle part of the tongue is more raised in the articulation of this letter.

*rz* is *r* blended with *ż*. The *r* is softly rolled, and its *z* is like the French *j*. Ex: *przy*.

*ż* like *j* in the French word *jour*.

To avoid the accumulation of softening *iota*-marks of the letters *ó, ń, ó, ó, ó, ó, ó, ó*, the following process is preferred. Before a vowel an *i* is inserted (as *bía mia* etc.); before *i* however and before consonants the *iota*-sign is dispensed with; *ó, ó, ó, ó, ó*, lose this sign even at the end of a word. Owing to the diminution of the characteristic signs, the letters *w, b, p, m, n, s, z* deviate from the original rule and may be followed by either *i* or *y*.

## SORBIAN OR WENDISH OF LUSATIA.

The vowels are: a, o, u, y, e, i. The union of a and o makes ò; o and u form ó; e and i coalesce in è. The semi-consonant j is connected with i; h with e; w with a o u.

The consonants are divided 1) into Labials w, f, v, b, p, m. 2) Palatals and Linguals n, l, r. 3) Dentals d, t, c. 4) Sibilants z, ž, s, š, c, č. 5) Gutturals h, ch (g) k.

With regard to their articulation these consonants are divided into broad and slender sounds, according as they are hardened or softened in their utterance.

Broad sounds: w, w', b, b', z, ž, d, dz, dž, h, g.

Slender sounds: f, v, p, p', s, š, t, c, č, ds, ts, ch, k.

Between these letters nine intermediates take their place: m, m', n, n', l', l, r, r'.

The whole Alphabet thus consists of the following 8 vowels and 32 consonants. A (ò) o, ó, u, y, e, è, i; j, w, w' (f, v) b, b', p, p', m, m', n, n', l, l' (l'), r, r', z, ž, s, š, d, dz, dž, t, c, č, č, ts, h, ch, g, k.

In combining one consonant or several consonants with a vowel to form a syllable, a distinction is made between hard soft and neutral consonants.

At the same time the following rule is to be observed. In the grammatical combinations of structure, derivation, declension, comparison and conjugation the vowel y cannot follow a soft consonant, nor can e and i follow a hard consonant, whilst the neutral consonants may be succeeded by either y or i. In conformity with this rule are reckoned as

Soft, j, w, v, b', p', m', n', l', r', z, š, c, dž, č.

Hard, k, r, z, s, d, dz, t, c (h, ch, g, k).

Neutral, w, f, b, p, m, n, ds, ts.

The letters qu and x, in words of foreign origin, are spelled kw and ks, as kwadrat, Aleksander, kwas. Also g occurs only in foreign words. V and f are found in but few vernacular terms.

### PRONUNCIATION OF THE CONSONANTS.

The accented characters w', b', p', m', n', r' differ from the unaccented in softness of sound. Before e (acute) è and i this accent is unnecessary, because these vowels are sufficient to soften the preceding consonants.

l sounds like v. In the north-eastern part of the country it is pronounced like a harsh l. For instance čólo.

dz as in English, but without a break between the two letters. Example na fidzy.

dž like g in gentle, as džera, nadžya.

z as in English, f. i. zuby.

ž like the s in pleasure, f. i. žolty.

š like sh, f. i. šaty, šéry.

c like ts, as cybać.

č nearly like ch in churn, f. i. čérn.

č the sharpest sibilant like tch in wretch, f. i. čorny.

ds, ts like ts, f. i. tsihać.

ch is frequently pronounced hard, like c before a, o, u, especially at the beginning of words, for instance chory.

j like y in yes.

s like z.

w like v.

### PRONUNCIATION OF THE VOWELS.

a i u as the vowels in are, here, true.

e is acute, grave, or long. After c z s it is often pronounced like y.

o acute grave or lengthened.

ó deep nearly like u.

è like ea in dear.

y deep as ea in dearth.

## CZECHIAN OR BOHEMIAN.

Roman.

a b c d e f g h c h i j k l m n o p r s t u v y z — á é í ó ú ý — ů — ě

Č č Ď ě D' d' Ě ě Ň Ň Ř ř Š š Ť ť Ž ž

German.

a b c d e f g h c h i j k l m n o p r s t u v y z — á é í ó ú ý — ů — ě

Č č Ď ě D' d' Ě ě Ň Ň Ř ř Š š Ť ť Ž ž

q and x only occur in foreign words. qu is generally replaced by kv as kvitance (receipt). Some writers use w for v and ou for au.

The accented vowels á é í ú ý and ů are long; without accent their pronunciation is short.

ě í í are termed soft vowels. The others are hard.

h c h k r are hard consonants.

c ě d' j ň ř š ť ž are soft, and

b d f g l m n p s t v z are called indednite consonants.

## THE FOLLOWING SOUNDS DIFFER FROM THE ENGLISH PRONUNCIATION.

a sounds like the first a in papa.

á like a in father.

c even before k, sounds like ts, as necky (nets-kū) the tray.

č like ch in church.

d before í í or when marked with the liquifying sign (ď) is sounded dy. This consonantal y is softly blended with its d, as div or diw (pronounced dyiv).

e like e in den.

é like a in late.

ě as ye in yet. It can only occur after v, f, b, p, m, n, d, t with which it coalesces. As věk (vyek) a century.

ey like a in late followed by y in yet, as woley (call thou). This final y forms a distinct sound.

g as in garnet. It only occurs in foreign words.

h aspirated at the beginning and in the middle of a word like h in house. At the end of a syllable it partakes of the guttural sound of ch and is somewhat softer than ch in the Scotch loch.

ch like ch in the Scotch word loch, as chleb (bread).

í as in grin.

í like ee in green.

j like y, as jaro (pr. yaro) springtime.

n before í í, or when marked ň, sounds like ni in opinion.

o as in of.

ó as in door.

ou is a diphthong which blends the sound of o (in pole) with u (in put). These vowels retain their separate pronunciation in verbs with prefixed po, as poubrati (po-u-bra-ti).

š (in German type šš, and as a final, š) like sh in fish.

t before í í, or when marked ť, sounds like a t with which the semi-vowel y coalesces, as ťulipan (pron. tyoo-le-pan) tulip.

u as in put.

ů and ů long as in blue.

y like u in the French pure.

z as in English but.

ž like s in measure.

## ORTHOEPIC RULES.

1) The vowels with the long accent (´) should not be lengthened to excess.

2) The consonants s, š, z, ž, become mute before the affix sky, as vesský.

3) The consonant j, as an initial before another consonant, is not pronounced, as jsem. When a syllable ending in a vowel precedes, the j becomes audible.

4) The compounds tc ds and ts are pronounced like c; dš and tš, like č.

5) Prepositions consisting of a simple consonant, such as k, s, v, z, although standing by themselves, do not form a syllable, but are sounded together with the first syllable of the next word, for instance k tobě s námi. These unconnected prepositions cannot be placed by themselves at the end of a line or a page.

6) The auxiliary verb. *jsem, jsi, jest-j sme, jste, jsou*, the conjunctive particles *bych, bys, by, bychom, byste, bý*, and the reflexive pronouns *se, si* attached to an active participle, are blended together in the pronunciation and joined by a hyphen. The same is the case when *si, se* are postpositions of nouns or adjectives. E. g. *shledání-se, modlíci-se*.

7) The soft consonants must be carefully distinguished in articulation from the indefinites, and the *i* *í* *ě* must properly coalesce with the latter.

8) The sibilants *c s z* differ from each other as well as from *č š ž*.

9) *h* is never mute. Example *hrom* (thunder) in which the *h* sounds as the *h* in the Scotch pronunciation of *which*.

10) The accent always rests on the first syllable, as *be-žim, pri-nesu*. The accented syllable may at the same time be lengthened, as *sná-žim, krá-sa*.

### DIVISION OF SYLLABLES.

In words which are difficult to pronounce, owing to the complication of consonants, it is of importance

to ascertain the component syllables. In this language most syllables end in vowels. The following circumstances must be noticed in applying this rule.

1) A consonant placed between two vowels or between a vowel and *l* or *r*, joins the next syllable. Example: *stra-ka, ba-vl-na*.

2) Of several consonants, followed by a vowel, only the last consonant goes to the next syllable; yet *sk, šk, st, št* are not separated but join the next syllable. In such instances the preceding syllable is often without a vowel, while *l* or *r* forms the medial consonant. Example, *hrn-číř*.

3) *l, r, ř*, with a vowel after, are joined by the preceding consonant in forming one syllable. To this rule *n* forms an exception. The consonants *sk, šk, st, št* must without separation be annexed to the syllable which follows. Example, *kno-flík, zei-dlík, svě-tlo, han-li-vý*.

4) Compound words are divided according to their component parts, as *ou-voz, ná-dvo-ří*.

## HUNGARIAN.

The Hungarian language comprises 31 sonants which are expressed by the Roman Alphabet. Owing to the combinations of some letters the Alphabet is formed as follows:

a b cs cz d e f g gy h i j k l ly m n ny o ö p r s sz  
t ty u ü v z zs.

The vowels *a e i o ö u ü*, are sounded as in German. With the accent at the top the vowels *á é í ó ō ú ű* are lengthened.

The combinations *cs cz gy ly ny sz ty zs* represent single articulations and are inseparable in spelling.

*cs* sounds like *ch* as *kocsi*.

*cz* » » *ts* as *czukor*.

*gy* » » *di* in the French word *Dieu*, as *gyár*.

*ly* » » *il* in the French word *email*, as *homály*.

*ny* » » *ni* in *opinion*, as *anya*.

*sz* » » *s* as *szag*.

*ty* » » *ti* in the French *metier* as *tyuk*.

*zs* » » *j* in the French word *jour* as *zsák*.

With regard to the consonants is to be noticed that,

*j* is pronounced like *y* in *yes*, and

*s* like the English *sh*, as *sas*.

The letters *c ch q w x* are only found in foreign words, for instance *Cato, Achilles*.

*y* does not represent an independent sound, but simply helps to soften the antecedent letter. Nevertheless in Old-Hungarian words *y* and *ch* are employed as independent letters. The former then sounds like *i* in *it*, and *ch* as in *church*. For example *Pálffy, Forgach*.

The compounds *cs* and *cz* are often denoted by *ts* and *tz*. Modern Orthography rejects this spelling except in words where the *t* is radical, as *barátság* (not *barácság*).

## LETTISH.

The Lets have adopted the following 22 letters of the German Alphabet,

a b c d e g h i j k l m n o p r ſ š t u w z.

The c and h are only used in combination with ſ to express the sounds of ſch and ſch. The h moreover serves to lengthen the vowels. The German consonants h ch f v never occur in Lettish. Nor are ö and ü in use. The q x y are represented by fw, fs, i.

By means of the 22 characters the following 34 simple sounds of the Lettish language are formed.

a b bj d e g g G j i k k K l t t m mj u n N o p pj r r R  
ſ dſ ſch dſch f S (s) ſch t tſch u w wj z.

### PRONUNCIATION OF THE SIMPLE VOWELS.

a e i u are short. When lengthened they are marked thus,

â ê î û

The o is always long, nevertheless it receives the lengthening mark to distinguish the accented oſh and ô from the lighter o.

### PRONUNCIATION OF THE DIPHTHONGS.

There are six diphthongs in this language, ai au ei oi ui ee. The first five are pronounced as in German. Although ai and ei are naturally long they occur with the circumflex âi êi. The diphthong oi only appears in the word woi. When au and ui are to become separate syllables the u and i are marked with the diæresis, aü, uï. Peculiar is the sound of ee; it passes from the articulation of ee (such as is heard in the German word See or in the English word say) to an intermediate sound, such as is heard in the second a of *advantage*.

### CONSONANTS.

The following letters have the English sound, b d l m n p r t. The j is a consonant like our y; w sounds as v, and z like ts. The labials b m p w may be followed by the modifying j, which like the Russian Ъ, helps to soften the consonant and causes a slight i to ring after it. It cannot be separated from the consonant nor uttered as an independent letter. l n r are virgulated as l̄ n̄ r̄, instead of being followed by j. Besides these letters the following four are virgulated.

g like the German f before e and i; g is like f before a o u.

k hard like k in *king*, k̄ as c in *come*, *cut*.

f, sharp like our s. š is the final of this sharp f.

ſ is soft like our z.

dſ form an inseparable sound like the soft Italian z.

ſch sharp like the Russian ш and the English sh. The virgula of ſ and ſch does not indicate the sound of an inherent j. It only helps to distinguish the sharply pronounced consonant from the soft ſ and ſch, the latter is pronounced like the Russian ж or the French j in *jour*.

tſch is like the English ch and dſch like g in *gentle*.

### PRONUNCIATION OF SUCCESSIVE CONSONANTS.

Two or more Consonants, joined together in one syllable or in two syllables, must be so articulated that each should retain its original and independent sound. The u is somewhat modified by the g and f. It being assimilated with these letters, its sound is like that in the English words *sing*, *sink* (not as in *tingle*, *tinkle*). When g and f are marked with the cross-stroke the u is likewise virgulated, and is then pronounced in accordance with the foregoing rules.

## GERMAN

A a	Ä ä	a	U u	U u	u	Ü ü	Ü ü	ü
B b	B b	b	O o	O o	o	Ö ö	Ö ö	ö
C c	C c	c	P p	P p	p	U u	U u	ü
D d	D d	d	Q q	Q q	q	ch	ch	ch
E e	E e	e	R r	R r	r	ck	ck	ck
F f	F f	f	S s	S s	s	ff	ff	ff
G g	G g	g	T t	T t	t	fi	fi	fi
H h	H h	h	U u	U u	u	fl	fl	fl
I i	I i	i	V v	V v	v	fi	fi	si
J j	J j	j	W w	W w	w	ff	ff	ss
K k	K k	k	X x	X x	x	ft	ft	st
L l	L l	l	Y y	Y y	y	ft	ft	sz
M m	M m	m	Z z	Z z	z	tz	tz	tz

The vowels are: a ä e i o ö u ü. The diphthongs or compound vowels are: ai ei au äu eu; all other letters are consonants.

## Simple vowels.

Every vowel, followed by two consonants, is short, if followed by only one consonant it is long.

Ä a is pronounced like *a* in the English word *father*.

Ä ä is pronounced like *a* in the English word *late*.

E e is pronounced like *e* in the English word *let*.

I i is pronounced like *e* in the English word *me*.

O o is pronounced like *o* in the English word *hope*.

Ö ö is pronounced like *eu* in the French word *seul*.

U u is pronounced like *oo* in the English word *roof*.

Ü ü is pronounced like the French *u*. There is no corresponding sound in the English language.

Y y has the sound of the German *i*, by which it is generally replaced.

## Double vowels.

The double vowels *aa*, *ee*, *oo*, are no diphthongs, because only one letter is sounded, and the second serves to indicate that the syllable is long.

*ie* is pronounced like *ea* in the English word *meat*.

## Diphthongs.

In the German diphthongs, the two vowels must be sounded one after the other, but so quickly as to form only one syllable.

ai and ei are pronounced almost alike, and have the sound of the English *i* in the word *fire*.

au is pronounced like *ou* in the English word *house*.

äu and eu sound almost like *oy* in the word *joy*.

## Consonants.

The pronunciation of the consonants differs but little in the two languages; the learner should notice the following peculiarities.

C c before ä e and i is pronounced like *ts*.

Before a u, before a consonant, and at the end of a syllable it is pronounced like *k*, by which in most cases it may be replaced.

Ch at the beginning of a word is pronounced like *k*, except in words derived from the French, in which it retains the French pronunciation.

In the middle or at the end of a word *ch* has a pronunciation quite peculiar to the German language, and more or less guttural, but for which no corresponding sound can be found in English; it is like the Scotch *ch* in the word *loch* after a u u au, but softer after ä e i ö ü än eu, and after a consonant.

th or th is pronounced like *r* when these consonants belong to the root or radical syllable.

But the *ch* preserves its guttural pronunciation, when it stands before the *s* or *f* by contraction or in a compound word.

G g at the beginning of a syllable is pronounced like the English *g* in the word *good*; but between two vowels, in the middle of a word and at the end of a syllable it has a sound like the *ch*, only much softened.

After u at the end of a word it is pronounced like a very soft *k*.

H h is always aspirated at the beginning of a syllable.

The aspiration becomes however almost imperceptible before a final *c*.

After a vowel or a t, the *h* is not pronounced, but, only indicates that the syllable is long.

J j only stands at the beginning of a syllable and is pronounced like the English *y* in the word *yet*.

f replaces the double *f*, and is pronounced short.

Qu qu has the sound of *kw* in English.

S s at the beginning of a syllable is pronounced like the English *s*, at the end of a syllable however like the English *z*.

The long *is* is placed at the beginning and in the middle, only at the end of syllables. If in an uninflected word there are two *i* one after another, they are written *ii*. *ß* is only placed at the end or in the middle of syllables, has the sound of the English *ss*.

Sh sh is pronounced like the English *sh*.

st and sp are pronounced like *st* and *sp* in English; but in some parts of Germany they pronounce *st* at the beginning of a word like *sh*, and *sp* like *shp*.

V v has the sound of *f*.

W w is pronounced like the English *v*.

Z z is sounded like *ts*.

tz replaces the double *z* and is pronounced very hard.

# DANISH

A	a
Åa	aa
B	b
C	c
D	d
E	e
F	f
G	g
H	h (haa)
I	i
J	j (Jod)
K	k (kaa)
L	l
M	m
N	n
O	o
P	p
Q	q
R	r
S	s
T	t
U	u
V	v (we)
X	x
Y	y
Z	z
Æ	æ (ä)
Ö	ö (ö)

The Danish language forms part of the great Gothic family and derives its origin from the ancient Norse which once extended over the whole of Scandinavia. Hence it is closely connected with modern Icelandic and Swedish, more distantly with the German, Dutch and English languages. In its further development it has embodied a variety of terms from the French, Latin and Greek.

The Alphabet consists of the adjoining 28 characters.

## VOWELS AND DIPHTHONGS.

The simple vowels are

a aa e i o u y æ ø

They are long as in *Stat* (the *a* as in *star*) *Kaad*, *Been*, *blid*, or short as in *Stad*, *Åand*, *ved*, *Bid*. The vowels *e i o u y ø* have an open sound as in *Met*, *Digt*, *godt*, or a close sound as in *streb*, *strid*, *god*. *e i u*, as long middle vowels, are doubled unless the word ends in *b d g v*, as *Steen*, *Been*, *Muus*. At the end only the *e* is doubled, as *see*, *fee*. The other vowels at the end of a syllable are always long, as *Taa*, *Eti*, *Ålo*, and often add a mute *e*, as *staae*. In inflections the reduplication of the vowel ceases, as *Huus*, *Huse*. The vowels *æ ø* cannot be spelled *ae oe*. *y* is pronounced like the French *u*, not like the English *y*. Ex: *Yude*. *aa* mostly sounds like *a* in *warm*. In modern times *å* has been adopted for *aa*, and *ø* for the open *ø*. For the deep pronunciation of this vowel, the mark *ø* has been retained.

As diphthongs are reckoned *ai ei oi vi øj au eu ou ui*. Some grammarians only admit the following six, *ai au ei eu ou vi*. The pronunciation of these vowels consists in a rapid blending of their respective sounds.

## CONSONANTS.

The consonants are

b c d f g h j k l m n p q r s t v x z.

According to the organs of speech they are divisible into: 1) Linguals *b t l n r*. 2) Labials *b p v f m*. 3) Palatals *g k q j*. 4) Sibilants *s z*. 5) Aspirate *h*. In the dialect of the Jnts the *h* is aspirated before *j* and *v*. *b d g* and *v* are softened to such a degree as to become frequently inaudible. After a vowel or when placed between two vowels *b* is pronounced *dh* (like

the Anglo-Saxon *ð* or the English *th* in *smooth*). Double *b* has a similar pronunciation. *lb* and *nb* sound like *ll* and *nn*. In *rb* the *b* has a very soft sound. Also before *s* the *b* loses part of its force, and it becomes inaudible before *t*. *j* sounds like *y* in *yes*. *v* sounds like the English *v*.

The following letters are peculiar to foreign words. 1) *c* before *a o u* or a consonant, is pronounced as in English; before *e i y æ ø*, it is like *s*. *ch* is like *k*. 2) *q*, followed by *v*, sounds like *kv*. 3) *z* is like *dz* or *tz*, and sometimes like the English *z*. 4) *x* in the middle and at the end of a word is like *gs* or *ks*. As an initial it is almost as soft as *z*.

Combinations of letters, *ff fi fl ll ff ff fl ft*.

## SWEDISH.

The Alphabet consists of the following 28 letters,

A a B b C c D d E e F f G g H h I i J j K k L l M m N n O o  
P p Q q R r S s T t U u V v X x Y y Z z Å å Ä ä Ö ö.

### PRONUNCIATION OF THE VOWELS.

The vowels *a o u ä* are hard, and *e i y ä ö* are soft. The vowels *a i u* sound as in German or Italian. *ä* is like *a* in *bare*. *å* like *o* in *tone*. The *e* sounds as *a* in *ale*. 1) when forming an independent syllable, Ex: *e-vig* (eternal). 2) at the end of a syllable, Ex: *ande* (spirit). 3) In many monosyllabic words, inflections, derivations and compounds. *e* sounds like *ai* in *air*. 1) before *f g l m n r*, when the next syllable of the same word is a consonant, as *after* (after). 2) before *j* as *nej* (no). 3) in many monosyllables, as *elg* (elk). These rules have many exceptions. *o* has two sounds, 1) nearly as in *move*, when it constitutes a syllable by itself, or at the end of a word; also before the radical *m*, in nouns and adjectives; in all derivatives of words ending in *o*; before *x* and in various other forms of words. 2) *o* has a lengthened sound before a final *f*, and a sharp sound (as in *not*) before *m n p r t*. — *ö* is mostly lengthened (nearly like the French *eu* in *leur*) as *dö* (to die), or the sound is sharper and quicker, as *för* (for).

There are no diphthongs in this language.

### CONSONANTS.

- |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><i>b</i> retains its ordinary sound.</p> <p><i>c</i> before <i>k</i> stands for <i>kk</i>. Before <i>h</i> it only occurs in the Swedish word <i>Och</i> (pronounced <i>ock</i>). Before the soft vowels it sounds like <i>s</i>, before the hard vowels like <i>k</i>.</p> <p><i>d</i> sounds like our <i>d</i>. Before <i>t</i> like <i>t</i>. As a final after <i>n</i> almost like <i>n</i>. Before <i>j</i> it is silent.</p> <p><i>f</i> as in English. At the end of a word like <i>v</i>. In the middle of a word before <i>v</i> of the same syllable, also after <i>l</i> and <i>r</i>, it is mute Ex: <i>kalfven</i> (pron. <i>kalven</i>). <i>f</i> and <i>v</i> of separate syllables retain their original sounds. Ex: <i>drifved</i> (= <i>driv-ved</i>).</p> <p><i>g</i> 1) as in <i>good</i> before a hard vowel, before <i>i</i> and <i>e</i> in a sharp unaccented syllable, at the end, and before a consonant of the same syllable. 2) like <i>y</i> in <i>yes</i>, before the soft vowels, and after <i>l</i> and <i>r</i>. Ex: <i>ge</i> (like <i>ya</i>). Of this rule there are some exceptions. 3) like <i>ck</i> when a <i>t</i> follows. Ex: <i>sagt</i> (= <i>sackt</i>). 4) like <i>ng</i> when a syllable ends in <i>gn</i>, as <i>vagn</i> (pronounced <i>vangn</i>). 5) before <i>j</i> it is mute. Ex: <i>gjort</i> (pr. <i>jort</i>).</p> <p><i>h</i> is aspirated, before <i>j</i> and <i>v</i> it is mute.</p> | <p><i>j</i> like <i>y</i> in <i>yes</i>. After <i>f m n p</i> the <i>j</i> is clearly articulated and the preceding consonant has a very slight pronunciation. As a final letter it is somewhat like the German <i>ch</i>.</p> <p><i>k</i> 1) as in English. It is subject to the same rules as <i>g</i>. 2) before the soft vowels it is like our <i>ch</i>. In <i>kjortel</i> the <i>k</i> sounds like <i>t</i>.</p> <p><i>l</i> before <i>j</i> is mute.</p> <p><i>m</i> as in English. The final <i>m</i> sounds like two <i>m</i> in those radical words which, on being inflected, are spelled with double <i>m</i>. Ex: <i>lam</i> (pron. <i>lamm</i>).</p> <p><i>q</i> with <i>v</i> after, sounds like <i>kv</i>.</p> <p><i>r</i> and <i>s</i> as in English. <i>stj</i>, <i>sj</i>, <i>skj</i> like <i>sh</i>. <i>sk</i> before soft vowels is likewise pronounced as <i>sh</i>.</p> <p><i>t</i> as in English. <i>tj</i> like <i>ch</i> in <i>church</i>. <i>tion</i>, with a hard vowel before it, like <i>schone</i>, and after a consonant like <i>shone</i>.</p> <p><i>v</i> as in English. The word <i>von</i> is pronounced <i>fon</i> as in German from which language it is borrowed.</p> <p><i>x</i> is like <i>ks</i>.</p> <p><i>z</i> is pronounced like <i>s</i>.</p> |
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## ANGLO-SAXON.

The Anglo-Saxon language developed itself from the Low-German (Old-Saxon) idiom, which was introduced in England by the Saxons in or before the fifth century. In the ninth century this language was cultivated in writing, and obtained currency through the agency of laws and translations. In the eleventh century, with the overthrow of the Saxon dynasty and the commencement of the Norman rule, French became the language of the court and of judicial proceedings. The knowledge of the Anglo-Saxon language was confined to the dependent classes and to the residents of convents. In the thirteenth century, when this idiom once more became popular, it had received such an amount of foreign elements, and had lost so many native characteristics, that it could only be considered as a mixed dialect, out of which the modern English language was gradually formed.

PRONUNCIATION.	
A a a	a e i o u have the same sound as
B b b	in German or Italian.
C c c	y has the same force as in Eng-
D d d	lish.
E e e	æ sounds as a in that.
F f f	
G g g	The Consonants have the following
H h h	peculiarities of pronunciation,
I i i	c is in all instances hard like k. cw
K k k	stands for kw.
L l l	f between two vowels or as a final
M m m	letter is pronounced like v.
N n n	g is always like the modern g in
O o o	go. Occasionally ȝ occurs instead
P p p	of g. This letter takes the sound
R r r	of y in yes.
S s s	cg is used instead of gg.
T t t	h is a strong aspirate. As a final
U u u	of a syllable and before a con-
V v v	sonant it resembles the German
X x x	ch.
Y y y	hw answers to the English wh. h
Z z z	is also found before the liquids
Ð ð dh	l, n, r.
Þ þ th	w sometimes precedes r and l.
	þ (tha) hard, like th in thick.
	ð (eth) soft, like th in this. Usually
	þ is the initial and ð the final of
	a syllable.
	ȝ and ƿ stands for and.
	ƿ stands for pæt.
	ī stands for oððe.

The accent (´) over a vowel denotes its length. In words of equal spelling this accent points out the difference of sound and meaning. For instance *ac* (*but, eke*) *āc* (*oak*). The elision of *m* and *n* is indicated by a short line (·) over the antecedent letter.

## IRISH.

It has been a subject of learned discussions whether the Irish in the Pagan period made use of the ancient alphabets, which are known by the name of *Ogham*, and are preserved in some sculptured monuments and in various MSS. With the introduction of Christianity and the spreading of conventual education the subjoined Alphabet was formed, which is still employed in antiquarian publications and in some works intended for the Irish people. At the present time the Irish language is frequently written and printed in Roman (English) characters.

Ḃ ḃ a	Ḃ Ḃ m
Ḅ ḅ b	Ḅ Ḅ n
Ḇ ḇ c k	Ḇ Ḇ o
Ḉ ḉ d	Ḉ Ḉ p
Ḋ ḋ e	Ḋ Ḋ r
Ḍ ḍ f	Ḍ Ḍ s
Ḧ ḧ g	Ḧ Ḧ t
Ḩ ḩ i	Ḩ Ḩ u
Ḭ ḭ l	Ḭ Ḭ h

### LIGATURES.

Irish MSS. contain contractions of which the following are the most usual.

Ḃ chd	Ḃ gh
Ḃ adh	Ḃ i
Ḃ e	Ḃ ll
Ḃ air	Ḃ m
Ḃ an	Ḃ n
Ḃ am	Ḃ nn
Ḃ agur	Ḃ f
Ḃ ar	Ḃ b
Ḃ v w	Ḃ rr
Ḃ v w	Ḃ h
Ḃ b	Ḃ si
Ḃ g	Ḃ h
Ḃ ch	Ḃ t
Ḃ d	Ḃ d
Ḃ d	Ḃ i
Ḃ ea	Ḃ i
Ḃ ea	Ḃ ie
Ḃ h	Ḃ i
Ḃ g	

GOTHIC

Form	Value	Num: power	Ligatures and marks	Observations
ⱦ	a	1	LIGATURES of frequent oc- currence in the Skeireins.  𐍃 for hT  𐍂 — 𐍂𐍃  𐍇 — 𐍇𐍃  𐍆 — 𐍆𐍃  𐍅 — 𐍅𐍃  𐍄 — 𐍄𐍃	<p>The Gothic language was in ancient times spoken by the eastern Germans who were designated by the collective name of Goths. It belongs to the Indo-Germanic family, and as a dead language, it has been remarkably preserved in the most ancient relic of Germanic literature. It is the first of the sister-languages that was committed to writing, and has thus reached us in its original purity. Although the relics of Gothic literature are very scanty, for beyond the fragmentary version of the Bible and the so called <i>Skeireins</i>, we possess but insignificant remains, there is enough matter extant to afford a perfect insight into the grammatical structure of the language.</p> <p>The Gothic Alphabet has the adjoining 25 letters. Their names are not known, as the language was not cultivated by native grammarians. The invention of the Gothic characters is attributed to Ulphilas.</p>
B	b	2		
ƿ	g	3		
ḁ	d	4		
Ḃ	e	5		
u	q	6		
z	z	7		
h	h	8	MONOGRAMS.  𐍃  for matpauis  𐍃  for markus.	<p>To distinguish the numerical letters from the other characters, the sign — or — is placed above or below the number. In these cases the diæresis over the i is omitted. Such letters receive a characteristic dot on the right and left. In the Neapolitan copy two dots, in the shape of a colon, are placed on both sides of the letter. Instead of dots the upright circumflex is ʀ sometimes to be found,</p> <p>𐍂 (2), 𐍇 (40), 𐍇 (60).</p> <p>The “catchword” is likewise enclosed between upright circumflexes, as 𐍇.</p>
ϕ	dh (p)	9		
ī	i	10		
ƿ	k	20		
λ	l	30		
𐍇	m	40		
𐍇	n	50		
g	j	60	NUMERICAL FIGURES.  𐍃 = 90  𐍃 = 900	<p>ORTHOGRAPHICAL SIGNS.</p> <p>1. Diacritical signs only occur in the diæresis over the initial i.</p> <p>2. Punctuation. As a general rule the single stop represents the brief pause, and the double stop a longer pause. Yet this punctuation is not consistently carried out, such signs being often introduced without purpose, and contrary to the sense. After a long pause a blanc space is left. In the other parts of the text the words are all strung together without division, and sometimes the new sentence is placed in an other line, in which case the initial letters are preceded by the sign — or —.</p> <p>3. The division of a word, written in two lines, is often made without any rule, and merely to fill the vacant space. The separation is in rare instances indicated by a hyphen, which then is marked at the beginning of the new line, and not at the end of the preceding one.</p> <p>4. Quotations are distinguished from the text by the single upright mark 𐍃 or the double 𐍃. This mark is continued in the margin before all the lines which contain the quotation. In the <i>Skeireins</i>, which has single marks of quotation, the sign 𐍃 is superadded in the first line, and the sign 𐍃 in the last.</p> <p>5. Abbreviations. The elision of n is marked by — or —, and m by — or —. These signs are generally used at the end of a line, when there is not enough space for the letters, but sometimes they also occur in the middle of a line. Real abbreviations are in some instances indicated by the sign 𐍃 before and after the word, but generally the signs —, — or — are employed.</p>
n	u	70		
π	p	80		
ƿ	r	100		
s	s	200		
T	t	300		
Y	v	400		
ƿ	f	500		
X	x	600		
Θ	w	700		
Q	o	800		

2. Punctuation. As a general rule the single stop represents the brief pause, and the double stop a longer pause. Yet this punctuation is not consistently carried out, such signs being often introduced without purpose, and contrary to the sense. After a long pause a blanc space is left. In the other parts of the text the words are all strung together without division, and sometimes the new sentence is placed in an other line, in which case the initial letters are preceded by the sign — or —.
3. The division of a word, written in two lines, is often made without any rule, and merely to fill the vacant space. The separation is in rare instances indicated by a hyphen, which then is marked at the beginning of the new line, and not at the end of the preceding one.
4. Quotations are distinguished from the text by the single upright mark 𐍃 or the double 𐍃. This mark is continued in the margin before all the lines which contain the quotation. In the *Skeireins*, which has single marks of quotation, the sign 𐍃 is superadded in the first line, and the sign 𐍃 in the last.
5. Abbreviations. The elision of n is marked by — or —, and m by — or —. These signs are generally used at the end of a line, when there is not enough space for the letters, but sometimes they also occur in the middle of a line. Real abbreviations are in some instances indicated by the sign 𐍃 before and after the word, but generally the signs —, — or — are employed.

RUNES

Form	Name	Value	Num: power	Observations
ƿ	Fé	f	1	<p>The adoption of the Norse Runes takes its origin in remote antiquity, and probably belongs to a pre-christian period, as is suggested by a variety of coincidences, although hitherto no positive proofs have been discovered in the Runic stones, by which those monuments might be connected with the prevalence of paganism. As is the case in the Greek, Gothic and other alphabets, the Runic signs represent both letters and numerals. These characters, 16 in number, bear peculiar names, and appear to have been arranged in an arbitrary manner, no attention having been paid to the mutual relation and transition of the several letters.</p> <p>The Runic characters were divided into three classes, in which the letter ƿ headed the first series, * and ↑ each of the other two series. These three divisions were therefore respectively named <i>Freys-aett</i> (Frey's family), <i>Hagls-aett</i> and <i>Tyrs-aett</i>. It is obvious that these letters could but imperfectly express the variety of sounds. There was only one sign for <i>g</i> and <i>k</i>, <i>d</i> and <i>t</i>, <i>b</i> and <i>p</i>, <i>u</i> <i>v</i> and <i>y</i>. It is most curious that the connective <i>e</i> and <i>ö</i> are omitted in this system. The latter vowel is replaced by <i>au</i>, and the former by <i>i</i>, <i>a</i>, <i>ia</i> and <i>ai</i>. Instead of <i>g</i> and <i>gh</i> the <i>h</i> is occasionally employed, while <i>u</i> might serve as the substitute of <i>o</i>, of the vowel <i>y</i>, of the diphthongs <i>ae</i>, <i>au</i> and <i>ey</i>, and even of the consonants <i>v</i> and <i>f</i>. <i>Yr</i> was equivalent to final <i>r</i> (of the same value as <i>or</i></p>
ᚋ	Ur	u	2	
ᚏ	Thurs	th	3	
ᚱ	Os	o	4	
ᚳ	Reid	r	5	
ᚷ	Kaun	k	6	
*	Hagl	h	7	
ᚢ	Naud	n	8	
ᚦ	Is	i	9	
ᚨ	Ar	a.	10	
ᚫ	Sol	s	11	
ᚭ	Tyr	t	12	
ᚯ	Biörk	b	13	
ᚱ	Laugr	l	14	
ᚴ	Madr	m	15	
ᚷ	Yr	y	16	

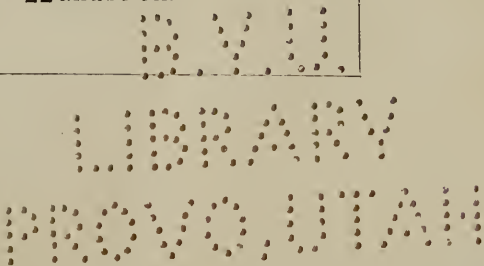
and *ur*), and as such it was called *aur*. When the insufficiency of the Runic alphabet was more sensibly felt, four additional letters were adopted, namely *e*, *g*, *p* and *v*. Their names were no longer in conformity with the 16 archaic characters. Nor were new shapes given to these Runes. The simple expedient of adding one dot or two to the kindred letter was considered sufficient; therefore these sign bear the name of *stungnar runir* (dotted runes). The old letters adapted to this purpose are *i*, *k*, *b* and *f*. When the Roman characters, along with the use of paper and parchment were adopted in the North, the Runes were increased by the addition of *dh*, *d*, *ae*, *oe*, *ue*, and subsequently by the superfluous letters *c*, *q*, *x* and *z*. The latter signs may be regarded as spurious augmentations of the Runes. The same criticism seems to hold good in reference to the three double runes, by which the numerals were increased to nineteen, and beyond which the numeral system of the Runes does not extend.

The 3 double-runers are,

- ᚦ al, Arlaugr. 17.
- \* mm, Tvimadr. 18.
- ᚫ tt, Belgthor. 19.

To express the subsequent numbers, several Runes were combined.

ᚦᚦ (= twice ten) denoted 20. ᚦᚦᚦ = 21. ᚦᚦᚫ = 22 and so on.



# RUNES

compared with the Gothic Alphabet of Ulfilas.

Northern Runes			Golden Bractates	Golden Horn		Anglo-Saxon			Alphabet of Ulfilas		
ƿ	fē	f	ƿ			ƿ	feoh	f	ƿ	faihu	ϕ
ᚋ	ūr	u v	ᚋ			ᚋ ᚗ	ur	u	ᚋ	urus	ou o
ᚢ	Þurs Þorn	Þ ᚢ	ᚢ			ᚢ	Þorn	Þ	ϕ	Þaurnus	ᚢ
ᚠ	ōs	o	ᚠ	ᚠ	a	ᚠ	os	o	ᚗ	ans	α
ᚱ	reið	r	ᚱ	ᚱ	r	ᚱ	rad	r	ᚱ	raiða	ρ
ᚷ	kaun	k g	<	<	c (k)	ᚷ ᚷ ᚷ	cen	c (k)	ᚷ	kaunzama	k c (γ κ)
			X	X	g	X	gyfu	g	ᚷ	giba	γ
			ᚷ	ᚷ	v	ᚷ	wen	w	Υ ᚷ	vinja	v u
*ᚨᚨᚨ	hagal	h	ᚨ	ᚨᚨ	h	ᚨ ᚨ ᚠ	hægl	h	ᚨ	hagls	h
ᚠ	nauð	n	ᚠ	ᚠ	n	ᚠ	nyd	n	ᚨ	náups	ν
ᚠ	is	i	ᚠ	ᚠ	i	ᚠ	is	i	ᚠ	eis	ι (η υ ε ει)
ᚠ	ār	a	ᚠ			ϕ ϕ	ger	ge (-y)	ᚠ	jēr	ι
(ᚠ)	(ȳr)		ᚠ			ᚠ ᚠ	eoh	eo	z z	iujā	ζ (σ)
			ᚢ			ᚢ	peorð	p	π	paírþr	π
			Ψ			Υ	eolhx				
ᚠ	sól	s	ᚠ	ᚠ	s	ᚠ	sigel	s	ᚠ ᚠ ᚠ	sójl	σ (ζ)
ᚠ	tȳr	t d	ᚠ	ᚠ	t	ᚠ	tir	t	ᚠ	tius	τ
ᚢ	biarkan	b p	ᚢ			ᚢ	beorc	b	ᚢ ᚢ	baírika	β (v)
			ᚠ	ᚠ	e	ᚠ	eh	e	ᚠ (~)	aíhvus	η (ε α ι α ε)
Υ ϕ	maðr	m	ᚠ	Υ	m	ᚠ ᚠ	man	m	ᚠ	manna	μ
ᚠ	lögr	l	ᚠ	ᚠ	l	ᚠ	lagu	l	ᚠ	lagus	λ
			ᚠ	ᚠ	gg (ng)	ᚠ	ing	ng	X +	iggvs	χ (k)
			ᚠ	ᚠ	d	ᚠ	dæg	d	ᚠ	dags	δ (ᚢ)
			(ᚠ)	ᚠ	o	ᚠ	eðel	é æ	ᚠ	ôpal	ω (o ou)
						ᚠ	ac	à			
						ᚠ	æsc	æ			
						ᚠ	ȳr	y			
						Υ	ear	ea			
						*	ior	io			
						Ψ ᚠ	calc				
						ᚠ ᚠ	stan	st			
						ᚠ ᚠ	gar	g			









# GRAMMATOGRAPHY





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